ORDER NO. VSD9403M249
D4

Service Manual

Sec. 1 *Operating Instructions*

Sec. 2 *Schematic Diagram & Circuit Board Diagrams*

Sec. 3 *Exploded Views & Replacement Parts List*

Panasonic

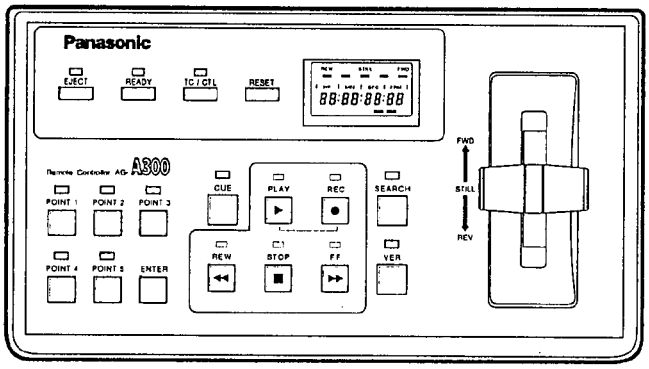
Remote Controller

AG-A300P

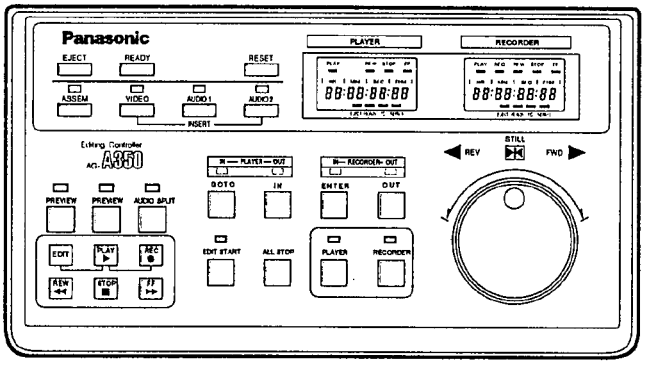
Editing Controller

AG-A350P

AG-A300



AG-A350



SPECIFICATIONS

AG-A300		AG-A350	
ITEM	SPECIFICATION	ITEM	SPECIFICATION
Power (Source)	Editing Controller: DC 7V, 125mA AC Adaptor: AC 120V, 50~60Hz (input) DC 7 V, 300mA (output) 0.88W	Power (Source)	Editing Controller: DC 6V, 155mA AC Adaptor: AC 120V (input) DC 6 V, 350mA (output) 0.93W
Operating Condition	Temperature: 41°F to 104°F (5°C to 40°C) Humidity: 35% to 80%	Operating Condition	Temperature: 41°F to 104°F (5°C to 40°C) Humidity: 35% to 80%
Dimensions	9-7/8"(W)×3-9/16"(H)×5-1/4"(D) 250mm(W)×90mm(H)×133mm(D)	Dimensions	9-7/8"(W)×1-13/16"(H)×5-1/4"(D) 250mm(W)×45mm(H)×133mm(D)
Weight	2.2lbs (1.0kg)	Weight	2.64lbs (1.2kg)
Standard Cable Length	Approx. 10ft. (3m)	Standard Cable Length	Approx. 10ft. (3m)
Pin Shape	9 pins	Pin Shape	9 pins
		REF VIDEO IN	BNC, 75Ω
Accessory	AC adaptor	Accessory	AC adaptor
Compatible VTRs	S-VHS: AG-DS850,AG-DS840 MII: AU-65H,AU-63H,AU-W33H	Compatible VTRs	Recorder: S-VHS: AG-7750,AG-DS850 MII: AU-66H,AU-65H,AU-W35H Player: S-VHS: AG-7750,AG-7650,AG-DS850, AG-DS840 MII: AU-66H,AU-65H,AU-63H,AU-62H AU-W35H,AU-W33H,AU-W32H

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

Panasonic®

INTRODUCTION

This Service Manual contains all technical information which allows service personnels to understand and service the Panasonic Remote Controller AG-A300 and Editing Controller AG-A350.
The AG-A300／AG-A350 has many special feature as described later.

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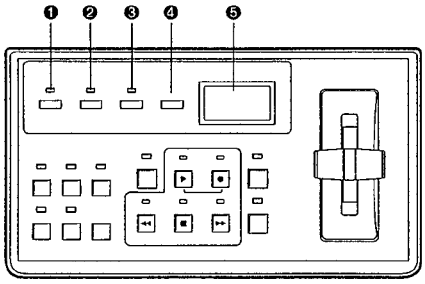
SECTION 1. OPERATING INSTRUCTIONS

AG-A300 Operating Instruction

Controls and Their Functions



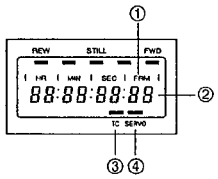
❶ EJECT button
This is used to eject the cassette tape. Its lamp is lighted while no tape has been inserted.

❷ READY button
When this is pressed, the tape protection function is set to ON; when it is pressed again, it is set to OFF. While its lamp is off, the tape in the VTR is loosened to protect it.

❸ CTL/TC button
Each time this is pressed, the counter's operation mode is set to CTL or TC (time code) alternately. Its lamp lights at the TC setting.

❹ RESET button
- This resets the counter when its mode is set to CTL.
- When any point button (POINT1 to POINT5) is pressed and then the RESET button is pressed while the lamp of the point button pressed is flashing, the entry of the cue point corresponding to the point button is canceled.
- When the RESET button is pressed while the counter is at the CTL setting, the entry of all the cue points is canceled if SW2-5 on the rear panel is ON.
- When the RESET button is kept depressed while the counter is at the TC setting, the user's bit value is displayed.

❺ Counter display panel



① SEARCH/VAR speed indicator
This indicates the tape direction and speed in the SEARCH or VAR mode. In the still-picture mode, the STILL indicator comes on, and two indicators are displayed up to medium tape speed. Three indicators are displayed when the tape travels faster than the medium speed. These indicators appear on the right when the tape travels in the FWD direction and on the left when it travels in the REV direction.

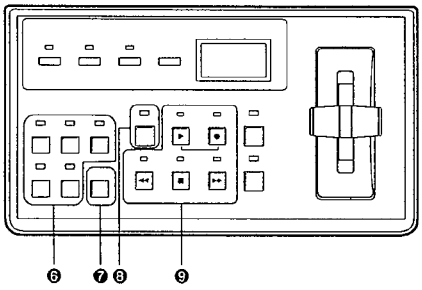
② Counter display
This displays the tape travel time in hour, minute, second and frame units when the CTL or time code signal on the tape is read out.
The drop frame displays are as shown below.

CTL	00:00:00:00	Non-drop frame
	00:00:00.00	Drop frame
TC	00:00:00:00	Non-drop frame
	00:00:00.00	Drop frame
	00:00:00 00	TC cannot be read
UB	00 00 00 00	

③ TC indicator
The TC indicator appears when the time code appears on the counter display panel.

④ SERVO-LOCK indicator
The SERVO indicator appears in the servo lock mode.

Controls and Their Functions (continued)



❻ POINT1 to POINT5 buttons
These are used to enter the cue points. When a button is pressed while its lamp is on or off, the lamp will start flashing. When a button is pressed again, the lamp lights if a cue point has been entered and it goes off if it has not been entered. When a button is kept depressed while a lamp is lighted, the counter value of the cue point entered at that particular point is displayed.

❼ ENTER button
When this button is pressed after a point button has been pressed and its lamp has started flashing, the cue point is entered at the point concerned.

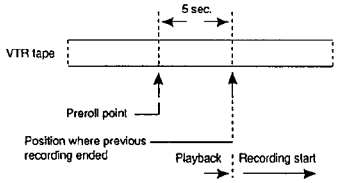
When the RESET and ENTER buttons are pressed together, the entry of all the cue points is canceled.

❽ CUE button
The cue-up operation is performed when this button is pressed after a point button in which a cue point has been entered has been pressed and the lamp of that button has started flashing.

❾ Function buttons
- **PLAY button:** Press this for playback. Press the PLAY and REC buttons together to initiate recording. The PLAY lamp remains lighted while playback or recording is in progress.
- **REC button:** Press the PLAY and REC buttons together to initiate recording. The unit will not respond to the REC+PLAY buttons when they are pressed in the auto stop mode. The series REC function is activated when the REC button alone is pressing once material has been recorded. After the tape is cued up to a position on the tape 5 seconds before the end of the previous recording and it has made its approach, recording commences automatically. The REC lamp remains lighted during recording.

Series REC (This function ensures recording free from disturbances at the joins between scenes).

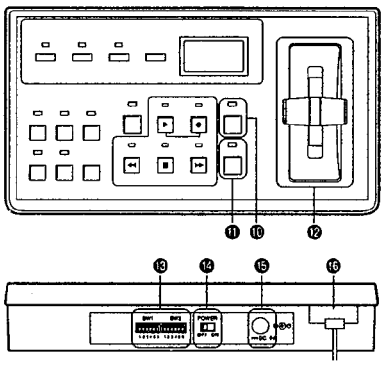
When the REC button is pressed, the VTR prerolls the tape to the position which is 5 seconds before the point where the last recording ended. The tape makes it approach, and then the VTR automatically proceeds with recording. The REC lamp remains lighted during recording. The edit timing is automatically set to 8 frames for an S-VHS VTR and 5 frames for an MII VTR.
They cannot be used in the auto stop mode.



Operating the RESET or CTL/TC button when the tape is ejected or the CTL mode is set will clear the end position of the previous recording, making it no longer possible to perform series recording. Press the REC and PLAY buttons together once more to record.

- **REW button:** Press this to rewind the tape. The REW lamp remains lighted while the tape is being rewound. The stop mode is established when the REW and FF buttons are pressed together.
- **STOP button:** Press this to stop the tape travel. The STOP lamp remains lighted while the tape has stopped traveling.
- **FF button:** Press this to fast forward the tape. The FF lamp remains lighted while the tape is being fast forwarded. The stop mode is established when the FF and REW buttons are pressed together.

Controls and Their Functions (continued)



⑩ **SEARCH button**
When this button is pressed, its lamp lights, and a point on the tape can be searched at any speed ranging from still picture to 32x normal tape speed by manipulating the lever. The speed can be varied using the lever.

⑪ **VAR button**
When this button is pressed, its lamp lights, and noise-free slow-motion playback can be performed. The speed can be varied using the lever.

⑫ **Lever**
This is used to vary the speed in the SEARCH or VAR mode.

⑬ **DIP switches**
These are used for the setting. Refer to the tables (page E-21) for further details.

⑭ **POWER switch**
This turns the power ON and OFF.

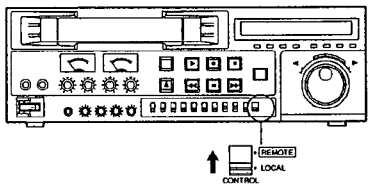
⑮ **DC IN jack**
Connect the accessory AC apdaptor to this jack. Be absolutely sure to use no other AC apdaptor.

⑯ **9-pin cable**
Connect this to the 9P remote jack on the VTR.

Connections

■ To connect the AG-DS850 or AG-DS840

- Switch on the VTR's power.
- Set the CONTROL switch to REMOTE.
- Set No.5002 (9P DEVICE TYPE SELECT) to "01 (S-VHS ID)" on the dial menu.



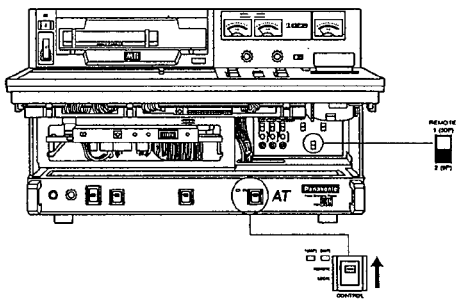
Follow the steps below to make changes to the dial menu.

1. Set the CONTROL switch to LOCAL.
2. Set the search dial mode switch to MENU.
3. Turn the jog dial in the jog mode, and press the STOP (DATA) button when the flashing display arrives at set-up menu No.5002.
4. Turn the search dial while holding down the STOP (DATA) button, and set the flashing display to "01 (S-VHS ID)."
5. Release the STOP (DATA) button.
6. Press the SEARCH (SET) button.
7. Set the search dial mode switch to SEARCH.
8. Set the CONTROL switch to REMOTE.

Connections (continued)

■ To connect an MII VTR (AU-66H or 63H)

- Switch on the VTR's power.
- Set the CONTROL switch to REMOTE.
- Set the REMOTE switch on the front sub-panel to "2 (9P)."
- Set No. 3004 (9P DEVICE TYPE SELECT) to "02 (M2 ID)" on the dial menu.

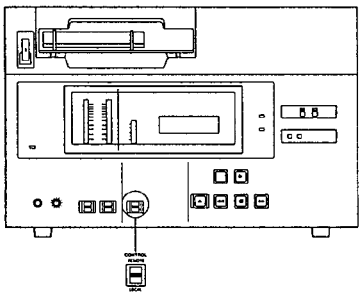


Follow the steps below to make changes to the dial menu.

1. Set the CONTROL switch to LOCAL.
2. Press the MENU button on the B1. SYSTEM CONTROL circuit board of the front sub-panel. The menu screen now appears on the TV monitor.
3. Turn the search dial to move the flashing display, and press the STOP button when set-up menu No. 3004 (9P DEVICE TYPE SELECT) flashes.
4. Turn the search dial while holding down the STOP button until "02 (M2 ID)" flashes.
5. Release the STOP button.
6. Press the SET button on the B1. SYSTEM CONTROL circuit board of the front sub-panel.
7. Set the CONTROL switch to REMOTE.

■ To connect an MII VTR (AU-W33H)

- Switch on the VTR's power.
- Set the CONTROL switch to REMOTE.
- Set No. 3004 (9P DEVICE TYPE SELECT) to "02 (M2 ID)" on the dial menu.



Follow the steps below to make changes to the dial menu.

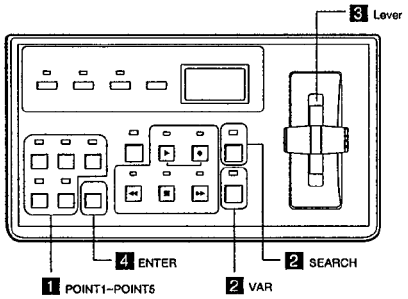
1. Set the CONTROL switch to LOCAL.
2. Press the MENU button on the B1. SYSTEM CONTROL circuit board of the front sub-panel. The menu screen now appears on the TV monitor.
3. Press the FF or REW button to move the flashing display, and press the STOP button when set-up menu No. 3004 (9P DEVICE TYPE SELECT) flashes.
4. Press the FF or REW button while holding down the STOP button until "02 (M2 ID)" flashes.
5. Release the STOP button.
6. Press the SET button on the B1. SYSTEM CONTROL circuit board of the front sub-panel.
7. Set the CONTROL switch to REMOTE.

Entering Cue Points

- Up to 5 cue points can be entered. Cue points on the tape can be accessed using the CUE key.
- After a cue point has been accessed, a PLAY, STOP, SEARCH or VAR operation can be performed. Use the DIP switches to select the operation.

There are two ways of entering cue points: one is by assigning point numbers and the other is by pressing the ENTER button and then entering the points in numerical order starting with the lowest number.

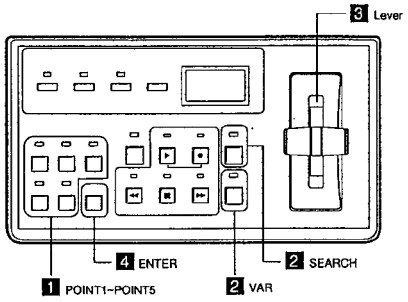
1 Cue point entry by assigning cue point numbers



1. Press the POINT1 to POINT5 button corresponding to the number of the cue point to be entered. The corresponding lamp starts flashing.
2. Press the SEARCH (or VAR) button.
3. Operate the lever to select the scene where the cue point is to be entered.
4. Press the ENTER button to enter the point. The lamp stops flashing and lights.

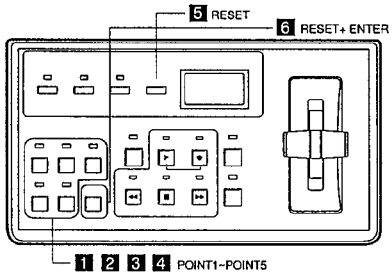
Notes:
1) To cancel the entry once a point button has been pressed, press the same point button again but do not press the ENTER button.
2) If the same point is entered twice, this entry is invalid. Cancel the point first, and then enter it.

2 Automatic cue point entry



1. Check that the lamp corresponding to the point button concerned is not flashing. If it is flashing, press the number button to stop the flashing.
2. Press the SEARCH (or VAR) button.
3. Operate the lever to select the scene where the cue point is to be entered.
4. Press the ENTER button. The lamp of the button for the lowest number where a cue points has not been entered now lights.
5. Repeat steps 2 to 4, and enter the points by pressing the ENTER key for each point. The cue points which have not been entered are entered starting with the lowest number and moving up to the higher numbers. An error results if the ENTER key is pressed when all the cue points have already been entered at the designated positions.

Checking and Clearing Cue Points



• Checking the cue points

1. Check that none of the POINT1 to POINT5 lamps is flashing. If one or more lamps are flashing, press the corresponding number button to stop the flashing.
2. Press the point button whose cue point is to be checked. While it is kept depressed, the counter value of the entered point appears on the counter display panel. If a point button whose cue point has not been entered is pressed, "– – – –" appears on the display panel. When the button is released, the original counter display is restored.
3. If the button just pressed is pressed again, its lamp stops flashing.

• Clearing a cue point (by specifying the number of the cue point)

4. Press the button whose point is to be cleared so that the lamp starts flashing.
5. Press the RESET button. The entered value is cleared, and the lamp goes off.

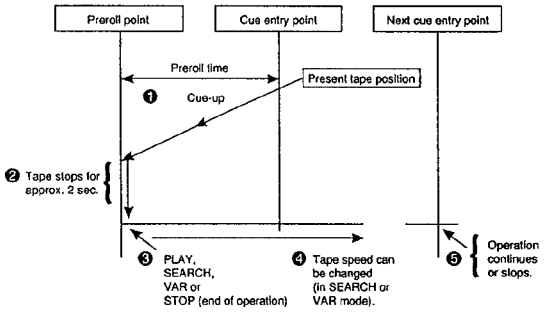
• Clearing all the cue points

6. Press the ENTER and RESET buttons together.

Note: If the RESET button is pressed first while the counter mode is at the CTL setting, the counter will be cleared.

Cue-up

This procedure enables entered cue points to be accessed.


Preroll point
Cue entry point
Next cue entry point
Preroll time
Present tape position
❶ Cue-up
❷ Tape stops for approx. 2 sec.
❸ PLAY, SEARCH, VAR or STOP (end of operation)
❹ Tape speed can be changed (in SEARCH or VAR mode).
❺ Operation continues or stops.

❶ When cue-up is started, the preroll point, which comes a number of seconds equivalent to the preroll time before the entered cue point, is accessed. The preroll time can be set from 0 frame to 10 seconds using the SW2-1 to SW2-4 switches on the rear panel. The unit responds only to the STOP button during the cue-up operation ❶.

❷ The tape now stops for about 2 seconds when it reaches the preroll point. The CUE lamp goes off.

❸
- The operation (STOP, PLAY, SEARCH or VAR) assigned by the SW1-3 or SW1-4 switch is now performed.
- The speed in the SEARCH or VAR mode is determined by where the lever is positioned at the time in question.
- If STOP has been selected, operation is now stopped.

❹ When the SEARCH or VAR operation is set after the tape has passed the cue entry point, the tape speed can be varied as desired by manipulating the lever.

❺ If STOP has been set by the SW1-2 switch, operation is stopped the moment the next cue entry point is passed. If, on the other hand, STOP has not been set, operation is continued.

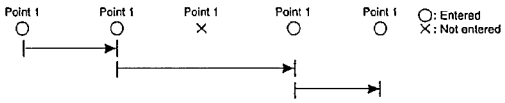
Auto Stop

❶ The auto stop mode is established after cue-up.
- If SW1-2 is ON, the buzzer sounds and the following mode is established:

In VAR mode: ⟶ VAR ∗ ∮
In SEARCH mode: ⟶ SHTL ∗ ∮
PLAY mode: ⟶ STOP

- If SW1-2 is OFF, the buzzer sounds but operation does not stop. Instead, whatever operation that was being performed is continued.

❷ In the auto stop mode, the counter values are compared in the sequence of the point numbers. For instance, in the forward direction the sequence is: first point 1, then point 2 which was entered after point 1, and then point 4 since point 3 was not entered.

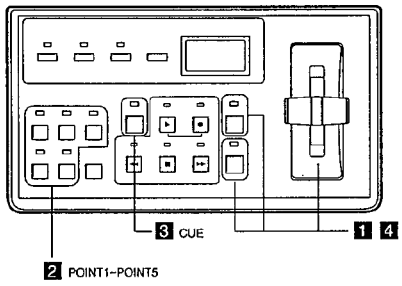


Tape stops at point 2.
Tape stops at point 4 since point 3 was not entered.
Tape stops at point 5.

- Conversely, in the REV direction, the counter values are compared starting with the value of the highest number point.

(Note) Enter the cue points in such a way that the counter values will be in the following sequence: point 1 ≺ point 2 ≺ ··· ≺ point 5. Proper operation will not result unless this sequence is adhered to.

❸ The auto stop mode is released by pressing any of the buttons listed below:
REW, STOP, FF, EJECT, TC/CTL, RESET+ENTER or RESET (with CTL setting)
The unit will not respond to the REC or REC+PLAY buttons when they are pressed in the auto stop mode.



1 When VAR or SEARCH has been assigned by SW1-3 or SW1-4, set the tape to the desired speed using the lever.

2 Press the button from among the POINT1 to POINT5 buttons corresponding to the tape cue-up point to start its lamp flashing.

3 Press the CUE button. Cue-up now commences.

4 After the tape has passed the cue entry point, the SEARCH or VAR button and lever can be used to change the tape speed as desired.

TC (Time Code) and CTL (Control) Signals

A time code denotes an absolute address which has been recorded on a track of the tape. Time codes are recorded by the time code generator and read by the time code reader. Once the values representing the addresses have been recorded on the tape, they will remain on the tape even when the counter's RESET button is pressed or even when the tape is ejected unless the time codes are recorded on the same tape again.
A CTL signal, on the other hand, is used to mark a relative address which has been recorded on the tape. When the RESET button is pressed or the tape is ejected, the counter is reset to "0" and the cue points are cleared.

DF (Drop Frames) and NDF (Non-Drop Frames)

DF and NDF are terms used when time code signals are edited.
The SMPTE time codes are recorded at a rate of 30 frames per second whereas the NTSC color signals are recorded at 29.97 frames per second. The longer the recording, the greater the resulting time delay, which becomes significant if a long recording is involved. For instance, in a 1-hour period the delay in the time code will be 3.6 sec. (108 frames). In order to compensate for this delay, real-time synchronization needs to be achieved by deleting some frames and advancing the time code. Frames which are deleted are known as drop frames, and the method which deletes frames for real-time synchronization is called the drop frame mode. The frames are calculated in this mode as follows: no frames are dropped for the 0, 10, 20, 30, 40, 50 and 60 (0) integer minutes but two frames—00 and 01—are deleted (dropped) for all other integer minutes.

Non-drop frame refers to a method called the non-drop frame mode under which the time delay is not compensated for but recorded, and frames are not dropped.

Examples

DF mode: Time code 01:04:59:29 is followed by 01:05:00:02
└── DF is indicated on the display by "." here.

NDF mode: Time code 01:09:59:29 is followed by 01:10:00:00
└── NDF is indicated on the display by ":" here.

DIP Switches Settings

			OFF	ON	Factory setting
SW1	1	CTL DISPLAY (CTL counter display)	±12H	24H	ON
	2	ENTRY POINT (operation when next entry point has been passed after cue-up)	NOT STOP (point is passed)	STOP (Tape is stopped there)	ON
	3, 4	OPERATION AFTER CUE-UP (operation after cue-up)	SW1-3 SW1-4 OFF OFF STOP ON OFF PLAY OFF ON SEARCH ON ON VARIABLE		OFF OFF
	5, 6	VARIABLE SPEED (speed variation range in VAR mode)	SW1-5 SW1-6 OFF OFF −1/4~+1 ON OFF −1~+1 OFF ON −1~+2 ON ON −1~+3		OFF OFF

			OFF	ON	Factory setting
SW2	1, 2, 3, 4	PREROLL TIME (preroll times)	SW2-1 SW2-2 SW2-3 SW2-4 OFF OFF OFF OFF 0 frame ON OFF OFF OFF 1 frame OFF ON OFF OFF 2 frames ON ON OFF OFF 3 frames OFF OFF ON OFF 4 frames ON OFF ON OFF 5 frames OFF ON ON OFF 10 frames ON ON ON OFF 15 frames OFF OFF OFF ON 20 frames ON OFF OFF ON 1 second OFF ON OFF ON 2 seconds ON ON OFF ON 3 seconds OFF OFF ON ON 4 seconds ON OFF ON ON 5 seconds OFF ON ON ON 7 seconds ON ON ON ON 10 seconds		OFF OFF OFF OFF
	5	ENTERY POINT CLEAR (all clear/not clear for entry points when counter is reset or tape is ejected)	NOT CLEAR	ALL CLEAR	ON
	6	SIGNAL STANDARD (number of frames)	25F (PAL)	30F (NTSC)	ON

A label describing the DIP switch settings is adhered to the back side of the unit's bottom frame.

Error Messages

E00-01: Cue-up is not possible since no cue points have benn entered.

E00-02: No more cue points can be entered. (Alternatively, this point has already benn entered.)

E00-03: The VTR does not come with a time code function.

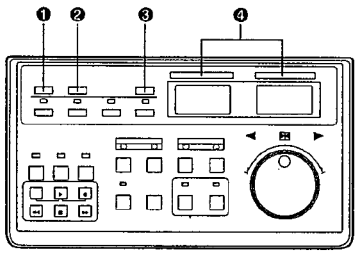
E00-04: No operation is possible because the VTR is in the local mode, a tape has not been inserted or trouble has occurred.

E00-05: No operation is possible since the tab on the tape has been broken out.

Description of 9P Remote Connector Signals

Pin No.	Signal	Pin No.	Signal
1	FRAME GROUND	6	RECEIVE COMMON
2	RECEIVE A	7	RECEIVE B
3	TRANSMIT B	8	TRANSMIT A
4	TRANSMIT COMMON	9	FRAME GROUND
5	SPARE		

Controls and Their Functions



❶ **EJECT button**
This is used to eject the cassette tape. When the control (CTL) signal is displayed on the counter, the counter is reset and the edit points are cleared.

❷ **READY button**
This transfers operation to the tape protection mode (READY OFF) and release this mode.

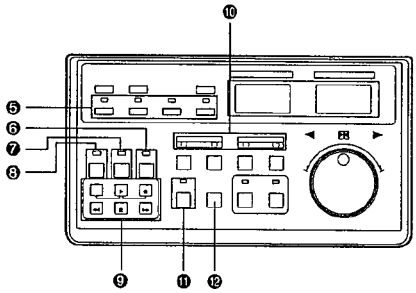
❸ **RESET button**
This resets the counter when the control (CTL) signal is displayed on the counter. In addition, the edit entry points are cleared.
When the **RESET** button is kept depressed while the time code (TC) is displayed on the counter, the user's bit value is displayed. When it is pressed together with IN (or OUT), the edit IN (or OUT) point is cleared.

❹ **Counter display panel**

PLAYER

RECORDER

Controls and their Functions (continued)



- **Time counter**
The CTL or TC signals on the tape are read, and the tape travel time is displayed in increments of hours, minutes, seconds and frames.
If an error occurs, the error number is displayed.
The drop frames and displays are correlated as follows.

Mode	Display	Description of display
CTL	00:00:00:00	Non-drop frame
	00:00:00.00	Drop frame
TC	00:00:00:00	Non-drop frame
	00:00:00 00	Drop frame
	00:00:00 00	TC cannot be read
UB	00 00 00 00	00 00 00 00

- **REC Indicator:** REC appears during recording (recorder only)
- **PLAY Indicator:** PLAY appears during playback.
- **STOP Indicator:** STOP appears during stop.
- **REW Indicator:** REW appears during rewinding.
- **FF Indicator:** FF appears during fast forwarding.
- **EJECT Indicator:** EJECT appears when the tape has been ejected.
- **READY Indicator:** READY appears when the tape protection mode has not been established.
- **TC Indicator:** TC appears when the time code is displayed on the counter.
- **SERVO-LOCK Indicator:** SERVO appears when the servo has locked.

Controls and Their Functions

⑤ **Editing mode setting buttons**
These are used to set assemble or insert editing. The lamps of the buttons keep flashing repeatedly if neither editing mode is established. Insert or assemble editing is selected while all the lamps are flashing. When insert editing has been established, the ASSEM button (or when assemble editing has been established, the VIDEO, AUDIO1 and AUDIO 2 buttons) cannot be pressed.

- **ASSEM button**
  When this is pressed while its lamp is flashing, the lamp lights, and the assemble editing mode is established. When it is pressed again, the lamp flashes, and the assemble editing mode is canceled.
- **VIDEO button**
  This sets or clears the insert editing mode for the video and Hi-Fi audio signals.
- **AUDIO 1 button**
  This sets or clears the insert editing mode for the normal audio CH1 signals.
- **AUDIO 2 button**
  This sets or clears the insert editing of the normal audio CH2 (or LTC) signals.

⑥ **AUDIO SPLIT button**
This is used during insert editing when the IN point of the audio signals is to be shifted and edited separately from the video signals. When it is pressed, the lamp starts flashing, and the audio split edit point entry mode is established.
To return to the original mode, press the button again. If the audio IN point has been entered, the split lamp lights; if it has not been entered, it goes off.

⑦ **REVIEW button**
This enables the edited tape to be reviewed.

⑧ **PREVIEW button**
This enables the operator to rehearse the editing.

⑨ **Function buttons**

- **PLAY:** Press this to start playback.
- **REC:** Press this and the PLAY button together to initiate recording. (The REC button can be used only for the recorder). When it is pressed during stop, still picture, playback or search, the input picture can be monitored on the recorder's TV monitor.
- **REW:** Press this to rewind the tape. The stop mode is established when the REW and FF buttons are pressed together.
- **STOP:** This stops all operations except editing.
- **FF:** Press this to fast forward the tape. The stop mode is established when the FF and REW buttons are pressed together.
- **EDIT:** When this is pressed during, still picture, playback or search, the editing can be monitored at the recorder as per the editing mode set.
  EDIT + PLAY: Press these for manual editing (recorder only). To stop manual editing, press the STOP or ALL STOP button.

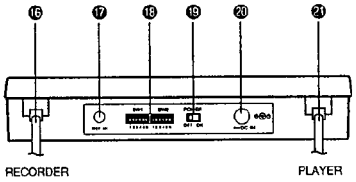
⑩ **Edit entry point display lamps**
These indicates the player's IN and OUT points and the recorder's IN and OUT points. The lamp flashes for the point which can be set. Once this point has been set, the lamp stops flashing and lights.

⑪ **EDIT START button**
Use this to initiate editing. Its lamps lights while editing is in progress.

⑫ **ALL STOP button**
When this is pressed during editing, the editing is stopped. Tape operation is stopped for both the player and recorder in all modes except editing.

⑮ **Jog/shuttle section**

- **Shuttle dial**
  Shuttle searches are performed by moving the outer ring. The playback speed is changed to up to approximately 32X normal tape speed in accordance with the position of the dial. (However, the actual speed differs according to the VTR used.)
  In the slow editing mode, this dial sets the slow speed and changes the playback speed.
- **Jog dial**
  When the shuttle dial is at the click-stop position, jogging can be performed by moving the inner ring. The speed of the playback pictures changes in the forward or reverse direction from still picture to normal playback speed according to the speed with which the dial is turned. (However, the actual speed differs according to the VTR used.)



⑯ **9-pin cable for recorder**
Connect this to the recorder's 9-pin remote connector.

⑰ **REF VIDEO IN connector**
This is terminated by a 75-ohm resistance inside the editing controller. It is used to supply a video signal for synchronization (reference signal) so that the entire system is controlled at the same synchronization. Be absolutely sure to connect the reference video signal.

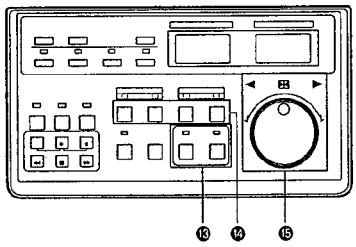
⑱ **DIP switches**
These are used for the settings. Refer to the tables (page E-29) for further details.

⑲ **POWER switch**

⑳ **DC IN jack**
Connect the accessory AC adaptor to this jack. Be absolutely sure to use no other AC adaptor.

㉑ **9-pin cable for player**
Connect this to the player's 9-pin remote connector.

Controls and their Functions (continued)



⑬ **Operated VTR selector buttons**

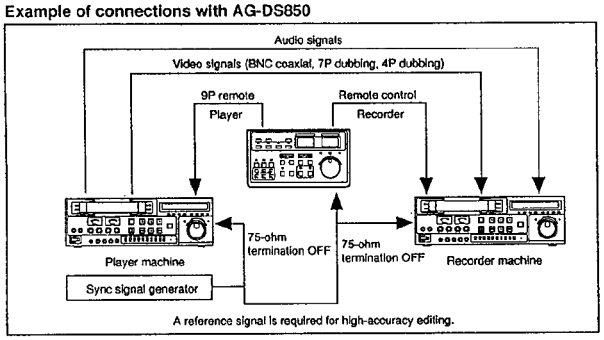
- **PLAYER button**
  When this is pressed, the player is the VTR which is controlled by the EJECT, READY, RESET, function, Jog, Shuttle, and edit ENTER buttons.
- **RECORDER button**
  When this is pressed, the recorder is the VTR which is controlled by the EJECT, READY, RESET, function, Jog, Shuttle, and edit ENTER buttons.

⑭ **Edit entry/check buttons**

- **IN button**
  This displays the edit IN points on the counter. Press it in combination with other buttons to perform the operations described below.
  IN + ENTER: For entering an edit IN point.
  GOTO + IN: For checking the picture at the edit IN point.
  IN + OUT: For checking the duration.
  RESET + IN: For clearing the edit IN point entry.
  The IN and OUT points can be set at the same locations for the player.
  The slow editing mode is established at this time.
- **OUT button**
  This displays the edit OUT points on the counter. Press it in combination with other buttons to perform the operations described below.
  OUT + ENTER: For entering an edit OUT point.
  GOTO + OUT: For checking the picture at the edit OUT point.
  OUT + IN: For checking the duration.
  RESET + OUT: For clearing the edit OUT point entry.
- **ENTER button**
  This enters the edit IN (or OUT) point when it is used together with the IN (or OUT) button.
- **GOTO button**
  This brings the tape to the IN (or OUT) point when it is used together with the IN (or OUT) button, and it enables the picture at the edit point to be checked.

Connections

Example of connections with AG-DS850



Operation

1 Connect the editing controller.
- Connect the REMOTE (9-pin) connector.
- Connect the audio signals.
- Connect the video signals.
- Connect the reference signal.

2 The settings differ depending on the type of VTR connected. Set the VTR switches and dial menu items.
Also, set the DIP switches on the editing controller.

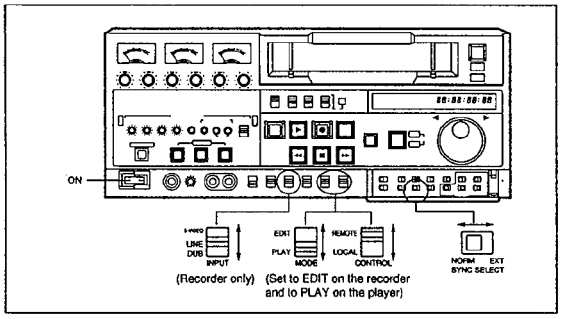
3 Set the CONTROL switch to REMOTE.

Note:

- Set the editing controller's edit timing to:
  8 frames for an S-VHS VTR (SW2-3: OFF; SW2-4: OFF)
  5 frames for an MII VTR (SW2-3: ON; SW2-4: ON)
- In the AUDIO 2 edit mode during insert editing, set the time code (LTC) and normal audio CH2 using SW2-5.
- The controller's REF VIDEO input connector is terminated with a 75-ohm resistance. Be absolutely sure to set the termination OFF for the VTR's sync signal input.

■ To connect the AG-7750 or AG-7650

- Switch on the power.
- Set the CONTROL switch to REMOTE.
- Set the SYNC switch to NORM for synchronizing with the input video signal. (In this case, the editing accuracy may suffer since it takes some time for the servo to lock.)
  Set the SYNC SELECT switch to EXT when an external reference signal is to be input.
- Set the MODE switch to EDIT on the recorder and to PLAY on the player. (AG-7750 only.)
- Select the position of the recorder's INPUT switch according to the input signal.
- Set No. 1001 (STILL TIME SELECT) on the dial menu to "03 (5 MIN)."
- Set No. 1002 (TAPE PROTECTION) on the dial menu to "00 (READY OFF)."
- Set No. 1003 (READY OFF MODE SELECT) on the dial menu to "00 (DRUM ROTATE)."
- Set No. 3002 (9P DEVICE TYPE SELECT) on the dial menu to "01 (S-VHS ID)."
- Set No. 3003 (REMOTE OPERATION) on the dial menu to "00 (9P)."



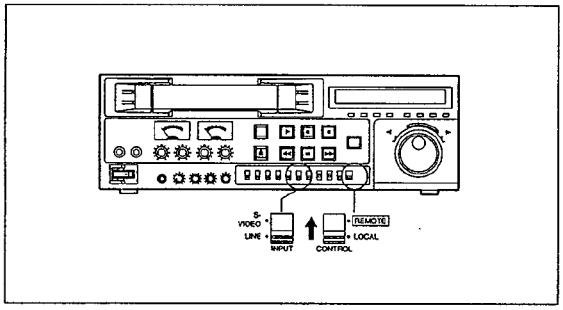
Follow the steps below to make changes to the dial menu.

1. Set the CONTROL switch to LOCAL.
2. Set the search dial mode switch to MENU.
3. Press the READY (MENU) button.
4. Turn the search dial in the jog mode, and press the STOP (DATA) button when the flashing display arrives at set-up menu No.1001.
5. Turn the search dial while holding down the STOP (DATA) button, and set the flashing display to "03 (5 MIN)."
6. Release the STOP (DATA) button.
7. In the same way, set the set-up menu No.1002, No.1003, No.3002 and No.3003 flashing displays to "00 (READY OFF)," "00 (DRUM ROTATE)," "01 (S-VHS ID)" and "00 (9P)," respectively.
8. Press the SEARCH (SET) button.
9. Set the search dial mode switch to SEARCH.
10. Set the CONTROL switch to REMOTE.

Connections (continued)

■ To connect the AG-DS850 or AG-DS840

- Switch on the power.
- Set the CONTROL switch to REMOTE.
- Set No.1001 (SYNC) on the dial menu to "00 (NORM)" for synchronizing with the input video signal. (In this case, the editing accuracy may suffer since it takes some time for the servo to lock.) Set the No.1001 (SYNC) on the dial menu to "01 (EXT)" when an external reference signal is to be input.
- Select the position of the recorder's INPUT switch according to the input signal. (AG-DS850 only.)
- Set No. 1002 (STILL TIME SELECT) on the dial menu to "03 (5 MIN)."
- Set No. 1003 (TAPE PROTECTION) on the dial menu to "00 (READY OFF)."
- Set No. 1004 (READY OFF MODE SELECT) on the dial menu to "00 (DRUM ROTATE)."
- Set No. 5002 (9P DEVICE TYPE SELECT) on the dial menu to "01 (S-VHS ID)."



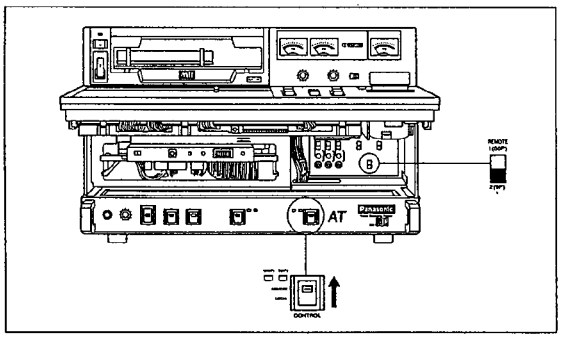
Follow the steps below to make changes to the dial menu.

1. Set the CONTROL switch to LOCAL.
2. Set the search dial mode switch to MENU.
3. Turn the jog dial, and press the STOP (DATA) button when the flashing display arrives at set-up menu No. 1002.
4. Turn the search dial while holding down the STOP (DATA) button, and set the flashing display to "03 (5 MIN)."
5. Release the STOP (DATA) button.
6. In the same way, set the set-up menu No. 1003, No. 1004 and No. 5002 flashing displays to "00 (READY OFF)," "00 (DRUM ROTATE)" and "01 (S-VHS ID)," respectively.
7. Press the SEARCH (SET) button.
8. Set the search dial mode switch to SEARCH.
9. Set the CONTROL switch to REMOTE.

Connections (continued)

■ To connect an MII VTR (AU-66H, 65H, 63H or 62H)

- Switch on the power.
- Set the CONTROL switch to REMOTE.
- Set the REMOTE switch on the front sub-panel to "2 (9P)."
- Set the SYNC switch on the control sub-panel to AUTO for synchronizing with the input video signal. (In this case, the editing accuracy may suffer since it takes some time for the servo to lock.)
  Set the SYNC SELECT switch to AUTO or EXT when an external reference signal is to be input. (AU-66H/65H only.)
- Set No. 1001 (STILL TIME SELECT) to "07 (10 MIN)" on the dial menu.
- Set No. 1002 (TAPE PROTECTION SEL) to "00 (T.RELEASE)" on the dial menu.
- Set No. 3004 (9P DEVICE TYPE SELECT) to "02 (M2 ID)" on the dial menu.
- Select the position of the recorder's INPUT switch according to the input signal.



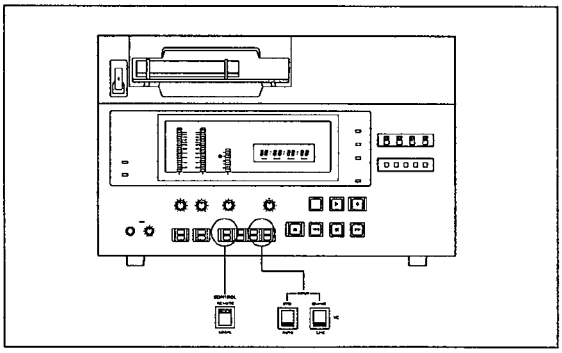
Follow the steps below to make changes to the dial menu.

1. Set the CONTROL switch to LOCAL.
2. Press the MENU button on the B1. SYSTEM CONTROL circuit board of the front sub-panel. The menu screen now appears on the TV monitor.
3. Turn the search dial to move the flashing display, and press the STOP button when set-up menu No. 1001 (STILL TIME SELECT) flashes.
4. Turn the search dial while holding down the STOP button until "07 (10 MIN)" flashes.
5. Release the STOP (DATA) button.
6. In the same way, set the set-up menu No. 1002 and No. 3004 flashing displays to "00 (T.RELEASE)" and "02 (M2 ID)," respectively.
7. Press the SET button on the B1. SYSTEM CONTROL circuit board of the front sub-panel.
8. Set the CONTROL switch to REMOTE.

Connections (continued)

■ To connect an MII VTR (AU-W35H, W33H or W32H)

- Switch on the power.
- Set the CONTROL switch to REMOTE.
- Set the SYNC switch on the control sub-panel to AUTO for synchronizing with the input video signal. (In this case, the editing accuracy may suffer since it takes some time for the servo to lock.)
  Set the SYNC switch to AUTO or EXT when an external reference signal is to be input.
- Set No. 1001 (STILL TIME SELECT) to "07 (10 MIN)" on the dial menu.
- Set No. 1002 (TAPE PROTECTION SEL) to "00 (T.RELEASE)" on the dial menu.
- Set No. 3004 (9P DEVICE TYPE SELECT) to "02 (M2 ID)" on the dial menu.
- Select the position of the recorder's INPUT switch according to the input signal.



Follow the steps below to make changes to the dial menu.

1. Set the CONTROL switch to LOCAL.
2. Press the MENU button on the B1. SYSTEM CONTROL circuit board of the front sub-panel. The menu screen now appears on the TV monitor.
3. Press the FF or REW button to move the flashing display, and press the STOP button when set-up menu No. 1001 (STILL TIME SELECT) flashes.
4. Press the FF or REW button while holding down the STOP button until "07 (10 MIN)" flashes.
5. Release the STOP button.
6. In the same way, set the set-up menu No. 1002 and No. 3004 flashing displays to "00 (T.RELEASE)" and "02 (M2 ID)," respectively.
7. Press the SET button on the B1. SYSTEM CONTROL circuit board of the front sub-panel.
8. Set the CONTROL switch to REMOTE.

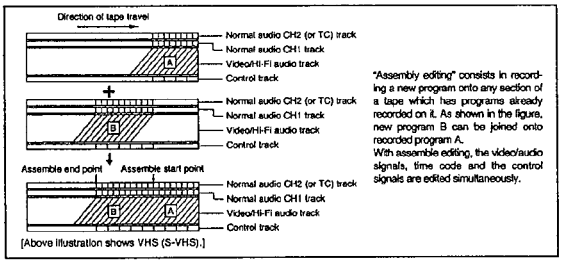
Automatic Editing

1 Selecting the editing mode

There is a choice between two editing modes: assemble editing and insert editing.
When power is switched on the editing controller, all the lamps start flashing. The editing mode is not selected while the lamps are flashing.

■ Assemble editing

The player's video and audio signals are recorded simultaneously on the recorder.
Unlike with insert editing, the video and audio signals cannot be selected. The player's time code (TC) and control (CTL) signals are also recorded on the recorder at the same time.

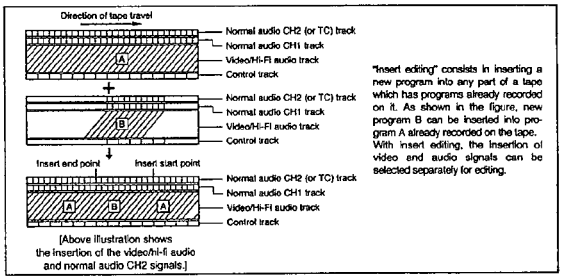


[Above illustration shows VHS (S-VHS).]

"Assembly editing" consists in recording a new program onto any section of a tape which has programs already recorded on it. As shown in the figure, new program B can be joined onto recorded program A.
With assemble editing, the video/audio signals, time code and the control signals are edited simultaneously.

■ Insert editing

In this mode, the player's video and audio signals can be selectively recorded on the recorder. However, the control signals are not recorded on the recorder.



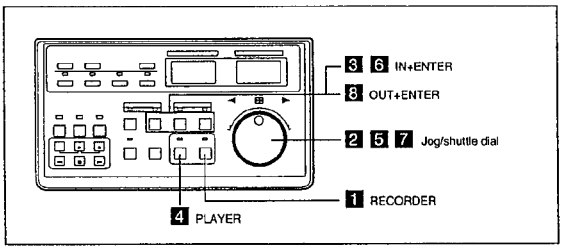
[Above illustration shows the insertion of the video/hi-fi audio and normal audio CH2 signals.]

"Insert editing" consists in inserting a new program into any part of a tape which has programs already recorded on it. As shown in the figure, new program B can be inserted into program A already recorded on the tape.
With insert editing, the insertion of video and audio signals can be selected separately for editing.

2 Entering the edit points

There are two types of edit points: edit IN (start) points and edit OUT (end) points.
A position on the tape where editing is to be commenced is known as an edit IN (start) point, and a position where editing is to be completed is known as an edit OUT (end) point. Edit points are searched using the search dial.

- When 3 of the 4 edit points on the recorder and player tapes have been entered, there is no need to enter the fourth point. Even if an attempt is made to enter the fourth point, it will not be entered provided that 3 points have already been entered.
  When an edit point is entered, a lamp lights.
  When an edit point is entered again after the editing has been entered, the edit point entered last will be entered. (Refer to the section on revising the edit points.)



Operation **Entering the recorder's edit points**

1 Press the RECORDER button to switch the VTR to be operated to the recorder.

2 Use the search dial to search the IN (start) point of the picture to be edited on the recorder.

3 Press the IN and ENTER buttons together at the edit IN point. When the recorder IN lamp lights, it means that the edit IN point at the recorder has been entered.

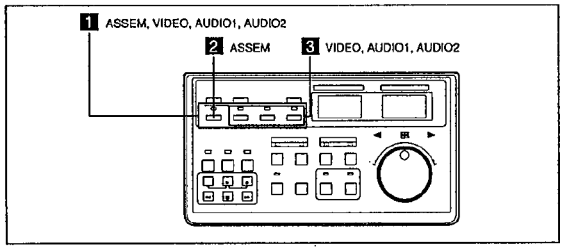
Entering the player's edit points

4 Press the PLAYER button to switch the VTR to be operated to the player.

5 Use the search dial to search the IN (start) point of the picture to be edited on the player.

Automatic Editing (continued)

1 Selecting the editing mode (continued)



Operation

1 Check that the editing mode ASSEM, VIDEO, AUDIO 1 and AUDIO 2 lamps are flashing. If any of them are lighted, press the lighted buttons.

Assemble editing

2 Press the ASSEM button.
Check that the ASSEM lamp lights.

Insert editing

3 Press the VIDEO, AUDIO 1 and AUDIO 2 channel buttons.
Check that the lamps light.
The buttons whose lamps have lighted are selected.
Press the channel buttons whose signals are not going to be edited and turn off the lamps.

Notes:

1) The first time one of the buttons is pressed, its lamp lights; the second time it is pressed, the lamp goes off. When all the ASSEM, VIDEO, AUDIO1 and AUDIO2 lamps go off, they start flashing again.
2) Bear in mind that the editing mode cannot be selected when the ASSEM lamp and Insert (VIDEO, AUDIO 1 and AUDIO 2) lamps have all lighted. Assemble or Insert editing can be selected only when all these buttons are flashing.

Automatic Editing (continued)

6 Press the IN and ENTER buttons together at the edit IN point. When the player IN lamp lights, it means that the edit IN point at the player has been entered.

7 Use the search dial to search the OUT (end) point of the picture to be edited on the player.

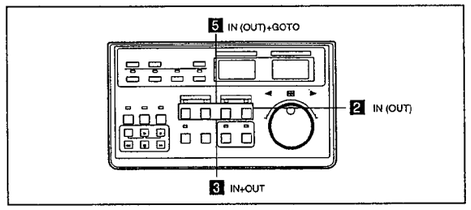
8 Press the OUT and ENTER buttons together at the edit OUT point. When the player OUT lamp lights, it means that the edit OUT point at the player has been entered.

Note:

1) Depending on the type of editing, the edit OUT point may be entered on the recorder rather than on the player. When, for instance, the editing time is predetermined with insert editing, it is more convenient to enter the edit OUT point on the recorder.
2) Edit points cannot be entered when the recorder is in the LOCAL mode or when it has not been connected.
3) External input editing
   The player and recorder are connected for normal editing but it is also possible to use the signals from a camera or other unit as the editing source.
   - Leave the player unconnected.
   - Perform the editing mode and edit entry point settings in the same way except for those settings which cannot be performed by the player.
   - Preview, automatic editing and review (even audio split editing) can be performed using the recorder alone.

3 Checking the edit points

The edit points are checked prior to the editing. This can be done using the counter display or TV monitor screen.



Operation **Checking the edit points on the counter display**

1. Check that the IN (or OUT) lamp is lighted.
   If the lamp is off, the edit point has not been entered.
2. Press the IN (or OUT) button.
   The edit IN (or OUT) point appears on the display.
3. Press the IN and OUT buttons together. The editing time appears on the display.
   If nothing appears on the display, the edit IN point has been entered but the OUT point has not.

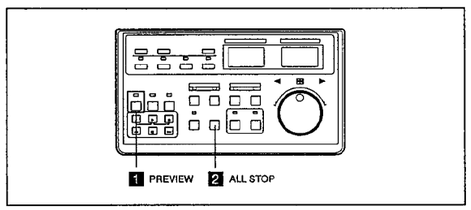
Checking the edit points on the TV monitor

4. Check that the IN (or OUT) lamp is lighted.
   If the lamp is off, the edit point has not been entered.
5. Press the GO TO and IN buttons together to check the picture at the edit IN point; press the GO TO and OUT buttons together to check the picture at the edit OUT point.

Note: Refer to page E-25 for the audio split edit points.

5 Preview

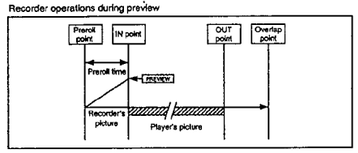
This is a rehearsal for editing. The part edited is not actually recorded on the tape.



Operation

1. Press the PREVIEW button. The PREVIEW lamp lights, and preview commences. When preview is completed, the PREVIEW lamp goes off.
2. To terminate preview at any point, press the ALL STOP button.

Recorder operations during preview

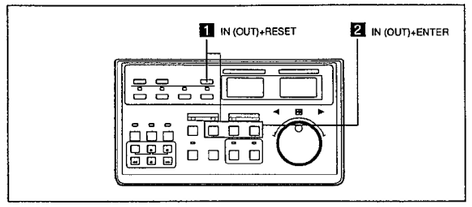


Notes:
1) If preview is conducted without the edit IN point having been entered, the position where the PREVIEW button was pressed will be entered as the edit IN point, and preview will be conducted accordingly.
2) If the ALL STOP button is pressed after the tape has passed the IN point when preview is being conducted without the edit OUT point having been entered, the position where the ALL STOP button was pressed will be entered as the edit OUT point in the case of insert editing, but it will not be entered as the OUT point in the case of assemble editing, and preview will be ended in this case.
3) With assemble editing, the recorder stops one second after the IN point. After the IN point, the counter on the recorder is advanced by the internal timer, and preview is completed at the OUT point.

Automatic Editing (continued)

4 Clearing or revising edit points

Follow the steps below to clear or revise the edit points.



Operation **Clearing an entered edit IN (or OUT) point**

1. Press the RESET button while holding down the IN (or OUT) button. The lamp goes off.

Revising an edit point using the search dial

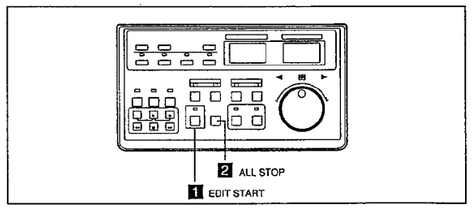
2. Search the edit point, press the IN (or OUT) and ENTER buttons together, and enter the edit point again.

Note: Bear in mind that if the edit IN point has a higher value than the OUT point when the edit point is entered again, the edit point will not be entered and an error will result.

Automatic Editing (continued)

6 Editing

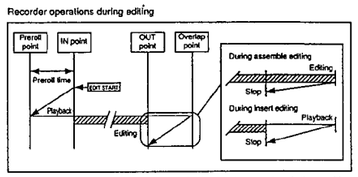
Editing is now performed in earnest. Editing proceeds on the basis of the entered edit data.



Operation

1. Press the EDIT START button. The EDIT START lamp lights, and editing is commenced.
2. To terminate editing at any time, press the ALL STOP button. If the edit OUT point has not been entered, the point at which the ALL STOP button was pressed becomes the OUT point.

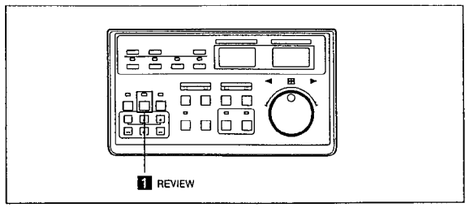
Recorder operations during editing



Notes:
1) When editing is performed without the edit IN point having been entered, the position where the EDIT START button was pressed is entered as the edit IN point, and editing is performed accordingly.
2) When editing is performed without the edit OUT point having been entered and then the ALL STOP button is pressed, the position where the button was pressed is entered as the recorder's edit OUT point, and editing is ended.
3) The preroll time is the time set by SW2-1 and SW2-2.
4) Upon completion of editing, the IN and OUT points entries are automatically cleared.

1 Review

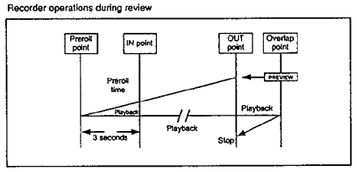
This operation checks what has been recorded on the tape upon completion of the editing.



Operation

1. Press the REVIEW button. The REVIEW lamp lights and the recorder starts the review. Upon completion of the review, the REVIEW lamp goes off, and the recorder VTR stops at the OUT point.

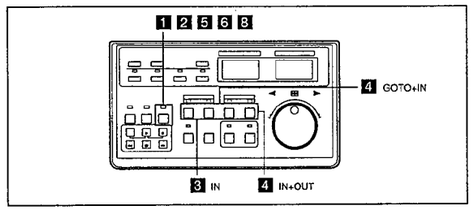
Recorder operations during review



Note:
1) If review is suspended using the ALL STOP button, the previous edit IN point, OUT point and editing mode are recalled.
2) A review operation cannot be performed when the tape has been ejected, the counter has been reset with the CTL displayed or a new edit point has been entered after editing has been executed.

Audio Split Editing

2 Checking the edit point



Operation **Checking the edit point on the counter display**

1. Check that the AUDIO SPLIT lamp has lighted. If the lamp is off, it means that the audio split editing points have not been entered.
2. When the AUDIO SPLIT button is pressed, its lamp starts flashing.
3. Press the IN button. The audio split edit point now appears on the display.
4. When the IN button and OUT button are pressed together, the audio split duration is displayed.

Checking the edit point on the screen

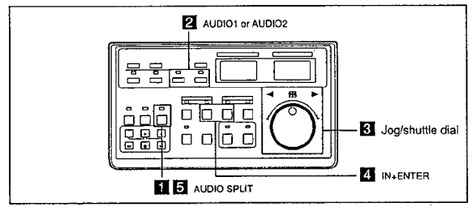
5. Check that the AUDIO SPLIT lamp has lighted. If the lamp is off, it means that the audio split editing points have not been entered.
6. When the AUDIO SPLIT button is pressed, its lamp starts flashing.
7. Press the GO TO button while holding down the IN button. The audio split edit point screen now appears. Turn the jog dial and check the sound.
8. Upon completion of the check, press the AUDIO SPLIT button and turn on its lamp.

Audio Split Editing

This type of editing enables the audio edit points and video edit points to be entered separately during insert editing.
Audio split editing may be used to achieve the following result, for instance: even when the picture remains unchanged, only the sound of the next picture is changed.

1 Entering the edit points

Prepara-tions
1) Check that the V and AUDIO1 (or AUDIO2) lamps have lighted.
2) Check that the video IN and OUT points have been entered.



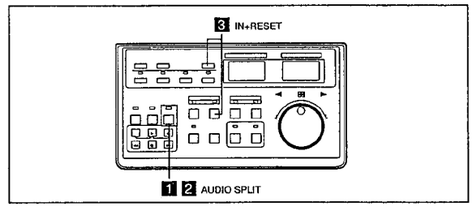
Operation

1. Press the AUDIO SPLIT button. When the AUDIO SPLIT lamp flashes, the audio split edit point can be entered.
2. Press the AUDIO 1 or AUDIO 2 button to turn on the lamp corresponding to the button pressed and select the channel whose signals are to be edited.
3. Search the player's (or recorder's) audio IN point.
4. Press the IN button and ENTER button together to enter the IN point. Upon completion of the entry, the IN lamp lights.
5. Press the AUDIO SPLIT button. Its lamp lights if the audio IN point has been entered; it goes off if the point has not been entered.

Notes:
1) Audio split editing can be conducted in the insert editing mode. The AUDIO SPLIT lamp remains off even if the ASSEM button is pressed.
2) After the audio IN point has been entered first, the video IN point can then be entered.
3) Audio split editing can be conducted for IN points only.

Audio Split Editing (continued)

3 Revising and clearing the edit point



Prepara-tions
1. Check that the AUDIO SPLIT lamp has lighted. If the lamp is off, it means that the audio split editing points have not been entered.
2. When the AUDIO SPLIT button is pressed, its lamp starts flashing.

Operation **When clearing the entered edit point**

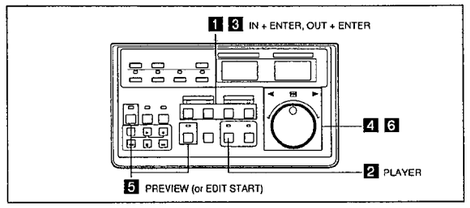
3. Press the RESET button while holding down the IN button. Its lamp goes off, and the display is cleared.

Using the search dial to revise an edit point

4. Search the edit point, and press the IN button and ENTER button together to enter the edit point again.

Slow Motion Editing

Still pictures or variable speed playback pictures can be recorded if a VTR with a slow motion playback function is connected (as the player) to the editing controller.



Operation

1. Enter the edit IN and OUT points on the recorder. (Refer to the page describing edit point entry.)
2. Press the PLAYER button to select the player.
3. Enter the player's edit IN point, and the enter the same point as the edit OUT point as well. (This establishes the slow motion editing mode.)
4. Move the search dial to set the desired speed.
   (Variable speed range for S-VHS VTR: −1/4x to +1x)
   (Variable speed range for MII VTR: −1x to +2x)
5. Press the EDIT START button to start the editing. Subsequent operations are the same as for regular editing.
6. Once the tape has passed the IN point, editing is possible at the desired speed by moving the search dial.

Note:
1) The player and recorder are not synchronized for slow motion editing.
2) Audio split editing cannot be performed during slow motion editing.

TC (Time Code) and CTL (Control) Signals

A time code denotes an absolute address which has been recorded on a track of the tape. Time codes are recorded by the time code generator and read by the time code reader. Once the values representing the addresses have been recorded on the tape, they will remain on the tape even when the counter's RESET button is pressed or even when the tape is ejected unless the time codes are recorded on the same tape again.
A CTL signal, on the other hand, is used to mark a relative address which has been recorded on the tape. When the RESET button is pressed or the tape is ejected, the counter is reset to "0" and the edit points are cleared.
The recording method thus differs depending on whether TC or CTL is used. When a tape has been edited using CTL, the edit points will be cleared when the RESET button is pressed or the tape is ejected, and so these points must be entered again. On the other hand, when a tape has been edited using TC, the edit points will not be cleared even if the RESET button is pressed or the tape is ejected.

DF (Drop Frames) and NDF (Non-Drop Frames)

DF and NDF are terms used when time code signals are edited.
The SMPTE time codes are recorded at a rate of 30 frames per second whereas the NTSC color signals are recorded at 29.97 frames per second. The longer the recording, the greater the resulting time delay, which becomes significant if a long recording is involved. For instance, in a 1-hour period the delay in the time code will be 3.6 sec. (108 frames). In order to compensate for this delay, real-time synchronization needs to be achieved by deleting some frames and advancing the time code. Frames which are deleted are known as drop frames, and the method which deletes frames for real-time synchronization is called the drop frame mode. The frames are calculated in this mode as follows: no frames are dropped for the 0, 10, 20, 30, 40, 50 and 60 (0) integer minutes but two frames—00 and 01—are deleted (dropped) for all other integer minutes.
Non-drop frame refers to a method called the non-drop frame mode under which the time delay is not compensated for but recorded, and frames are not dropped.

Examples

DF mode: Time code 01:04:59:29 is followed by 01:05:00:02
DF is indicated on the display by " . " here.

NDF mode: Time code 01:09:59:29 is followed by 01:10:00:00
NDF is indicated on the display by " : " here.

Preroll

If the images remain disturbed at joins on an edited tape, the editing cannot be called professional. For this reason, the operations of the player and recorder must be synchronized when editing. The preroll time is provided for synchronizing their operations.
This editing controller can set 3, 5, 7 or 10 seconds as the preroll time. Operations are synchronized during the preroll period but not if the time allocated is insufficient. In a case like this, extend the preroll time.
If the unit should fail in synchronization, it automatically extends the preroll time by selecting the next setting, and proceeds with editing again.
If synchronization fails after this process has been repeated 3 times, an error will result. If this happens, stop trying to synchronize the player and recorder, and simply continue with operation.

DIP Switch Settings

			OFF	ON	Factory setting
SW1	1	CTL DISPLAY (CTL counter display)	±12H	24H	ON
	2	PLAYER EDIT REFERENCE (player counter mode)	TC	LTC	ON
	3	RECORDER EDIT REFERENCE (recorder counter mode)	TC	CTL	ON
	4	SYNCHRO VTR (synchronized control)	PLAYER (synchronization at player)	RECORDER (synchronization at recorder)	OFF
	5	CAP OVERRIDE (synchronization, color framing selection)	SW1-5 SW1-6 OFF OFF NOT SYNCHRO (no synchronization) ON OFF FRAMING (framing and synchronization) OFF ON COLOR FRAMING (color framing and synchronization) ON ON Not used		ON
	6				OFF

			OFF	ON	Factory setting
SW2	1 2	PREROLL TIME (preroll time setting)	SW2-1 SW2-2 OFF OFF 10 SEC ON OFF 7 SEC OFF ON 5 SEC ON ON 3 SEC		ON OFF
	3 4	EDIT TIMING (edit timing setting)	SW2-3 SW2-4 OFF OFF −8 FRAMES ON OFF −7 FRAMES OFF ON −6 FRAMES ON ON −5 FRAMES		OFF OFF
	5	AUDIO CH2 (editing mode AUDIO2 setting)	AUDIO	TC	OFF
	6	SIGNAL STANDARD (number of frames)	25F (PAL)	30F (NTSC)	ON

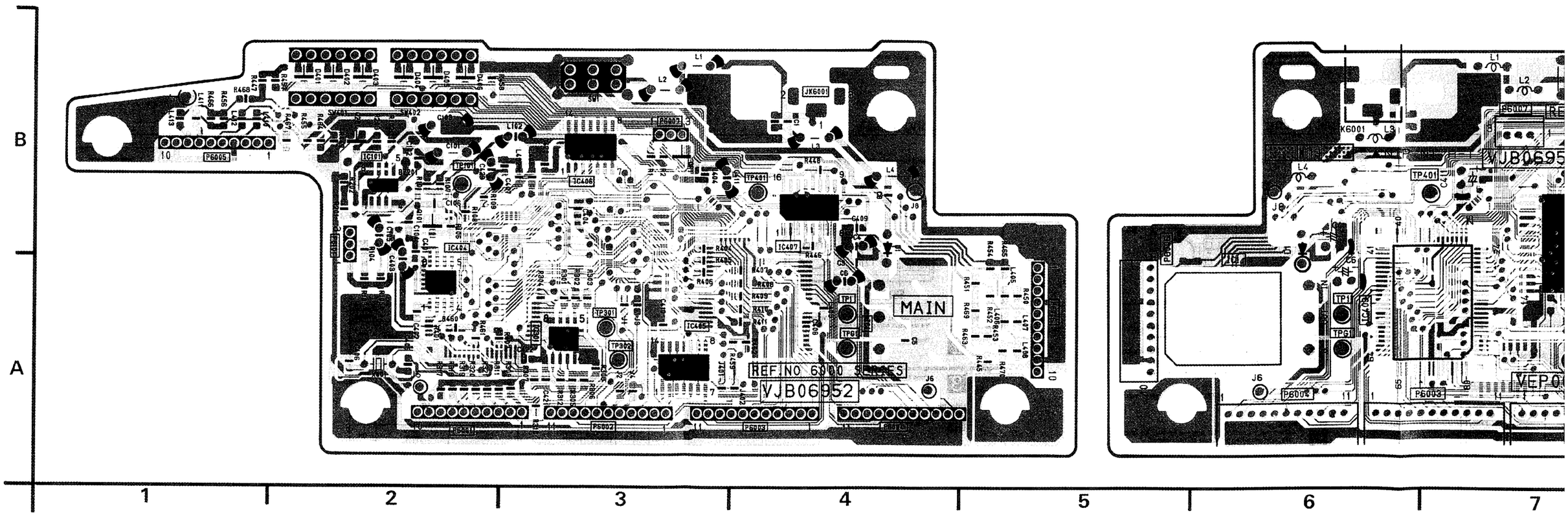
Description of 9P Remote Connector Signals

Pin No.	Signal	Pin No.	Signal
1	FRAME GROUND	6	RECEIVE COMMON
2	RECEIVE A	7	RECEIVE B
3	TRANSMIT B	8	TRANSMIT A
4	TRANSMIT COMMON	9	FRAME GROUND
5	SPARE		

Error Messages

Error No. displayed	Display used	Player control error
01-00	PLAYER	This function is not used at present.
01-02	PLAYER	Cannot be executed since player is not connected. VTR control switch is at LOCAL. VTR is in the eject mode.
Error No. displayed	**Display used**	**Recorder control error**
02-00	RECORDER	This function is not used at present.
02-02	RECORDER	Cannot be executed since recorder is not connected. VTR control switch is at LOCAL. VTR is in the eject mode.
Error No. displayed	**Display used**	**Edit entry error**
03-00	RECORDER	Edit entry is incomplete.
03-01	RECORDER	Recorder is not connected; editing mode cannot be entered.
03-02	RECORDER	Cannot be executed in preset editing mode.
03-04	RECORDER	Cannot be entered since player has not been connected.
03-05	RECORDER	Cannot be entered since recorder is not connected.
03-06	RECORDER	Entry of 4th point; clear one of the points entered and then enter.
03-07	RECORDER	Audio split IN point has already been entered.
03-08	RECORDER	Cannot be executed since audio split mode has not been established.
03-13	RECORDER	Select assemble or insert editing while the ASSEM, VIDEO, AUDIO 1 and AUDIO 2 lamps are flashing.
03-14	RECORDER	Entry of IN point which has a higher value than OUT point.
Error No. displayed	**Display used**	**Edit entry error**
05-00	RECORDER	Editing is already being conducted.
05-01	RECORDER	Cannot be executed because edit entry is incomplete.
05-04	RECORDER	Cannot be executed because of failure to connect or trouble.
05-05	RECORDER	Cannot be executed because of failure to connect or trouble.
05-08	RECORDER	Servo is not locked in VTR.
05-09	RECORDER	VTR control failure during editing.
05-10	RECORDER	Review cannot be executed because edit points or editing mode has been changed.

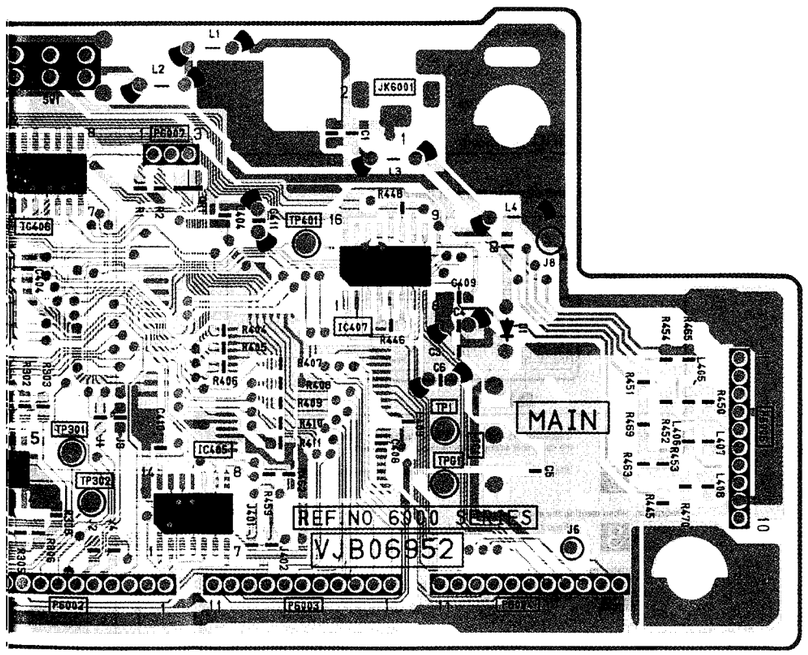
SECTION 2. SCHEMATIC DIAGRAM & CIRCUITS BOARD DIAGRAM
MAIN C.B.A. (E1: AG-A350/E2: AG-A300)

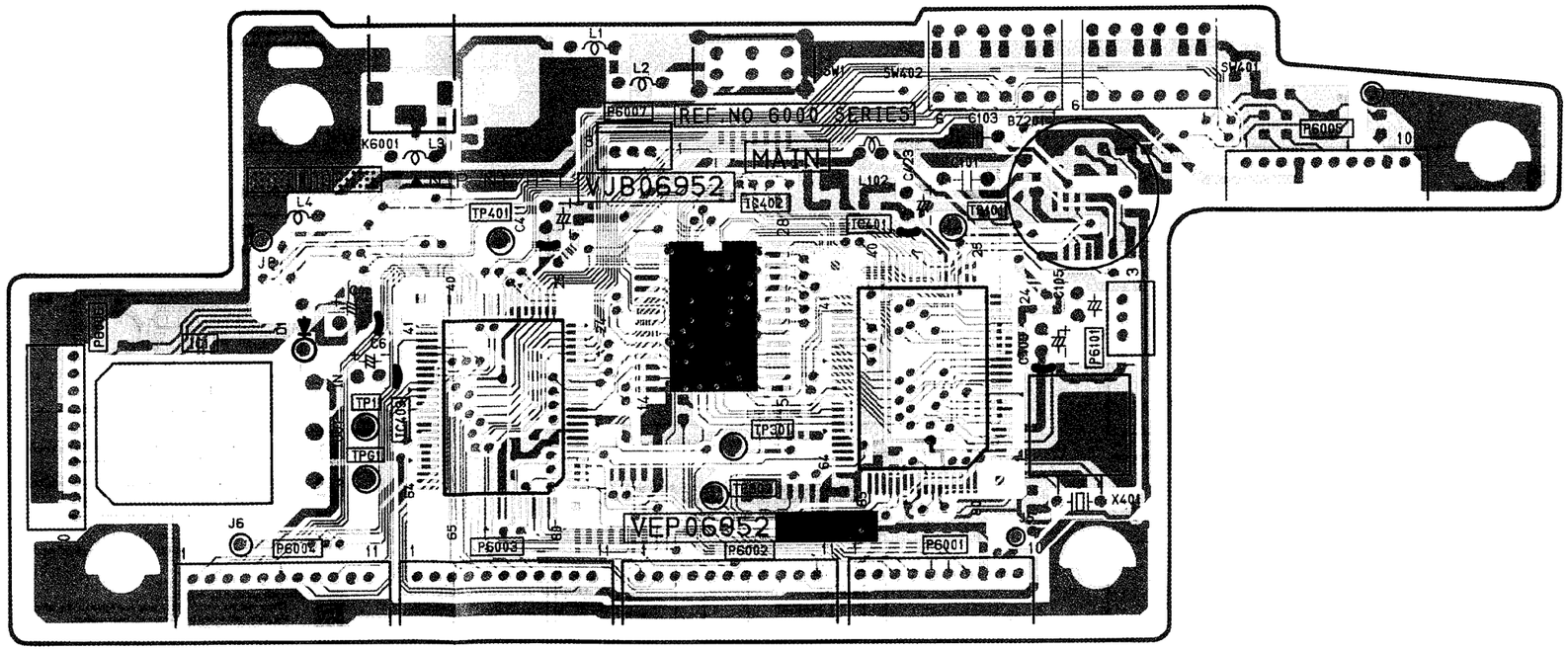


) DIAGRAM

MAIN C.B.A.			
Transistor		TP6301	A-7 Ⓒ
Q6101	B-2 Ⓕ	TP6302	A-3 Ⓕ
Q6201	B-2 Ⓕ	TP6302	A-7 Ⓒ
Transistor & Resistor		TP6401	B-4 Ⓕ
QR6001	B-3 Ⓕ	TP6401	B-7 Ⓒ
Integrated Circuit		TPG6001	A-4 Ⓕ
IC6001	A-4 Ⓕ	TPG6001	A-6 Ⓒ
IC6001	B-6 Ⓒ	**Connector**	
IC6101	B-2 Ⓕ	P6001	A-2 Ⓕ
IC6301	A-3 Ⓕ	P6001	A-8 Ⓒ
IC6401	B-8 Ⓒ	P6002	A-3 Ⓕ
IC6402	B-7 Ⓒ	P6002	A-7 Ⓒ
IC6403	A-6 Ⓒ	P6003	A-4 Ⓕ
IC6404	B-2 Ⓕ	P6003	A-7 Ⓒ
IC6405	A-3 Ⓕ	P6004	A-4 Ⓕ
IC6406	B-3 Ⓕ	P6004	A-4 Ⓕ
IC6407	B-4 Ⓕ	P6004	A-6 Ⓒ
Test Point		P6005	B-1 Ⓕ
TP6001	A-4 Ⓕ	P6005	B-9 Ⓒ
TP6001	A-6 Ⓒ	P6006	A-5 Ⓕ
TP6101	B-2 Ⓕ	P6006	B-5 Ⓒ
TP6101	B-8 Ⓒ	P6007	B-2 Ⓕ
TP6301	A-3 Ⓕ	P6007	B-7 Ⓒ
		P6101	B-2 Ⓕ
		P6101	B-8 Ⓒ

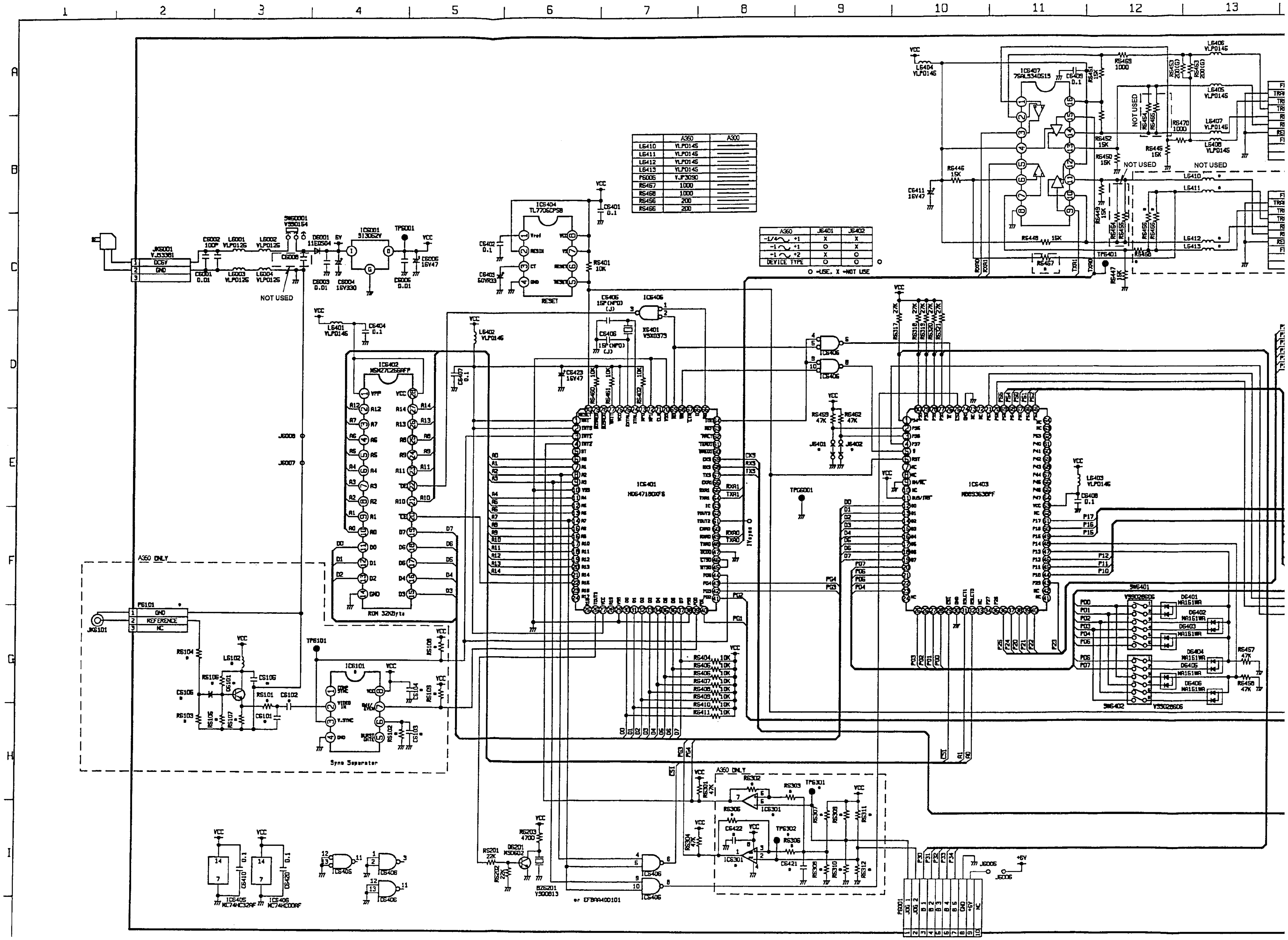
ADDRESS INFORMATION
Ⓒ... COMPONENT SIDE
Ⓕ... FOIL SIDE





3 4 5 6 7 8 9

MAIN SCHEMATIC DIAGRAMS

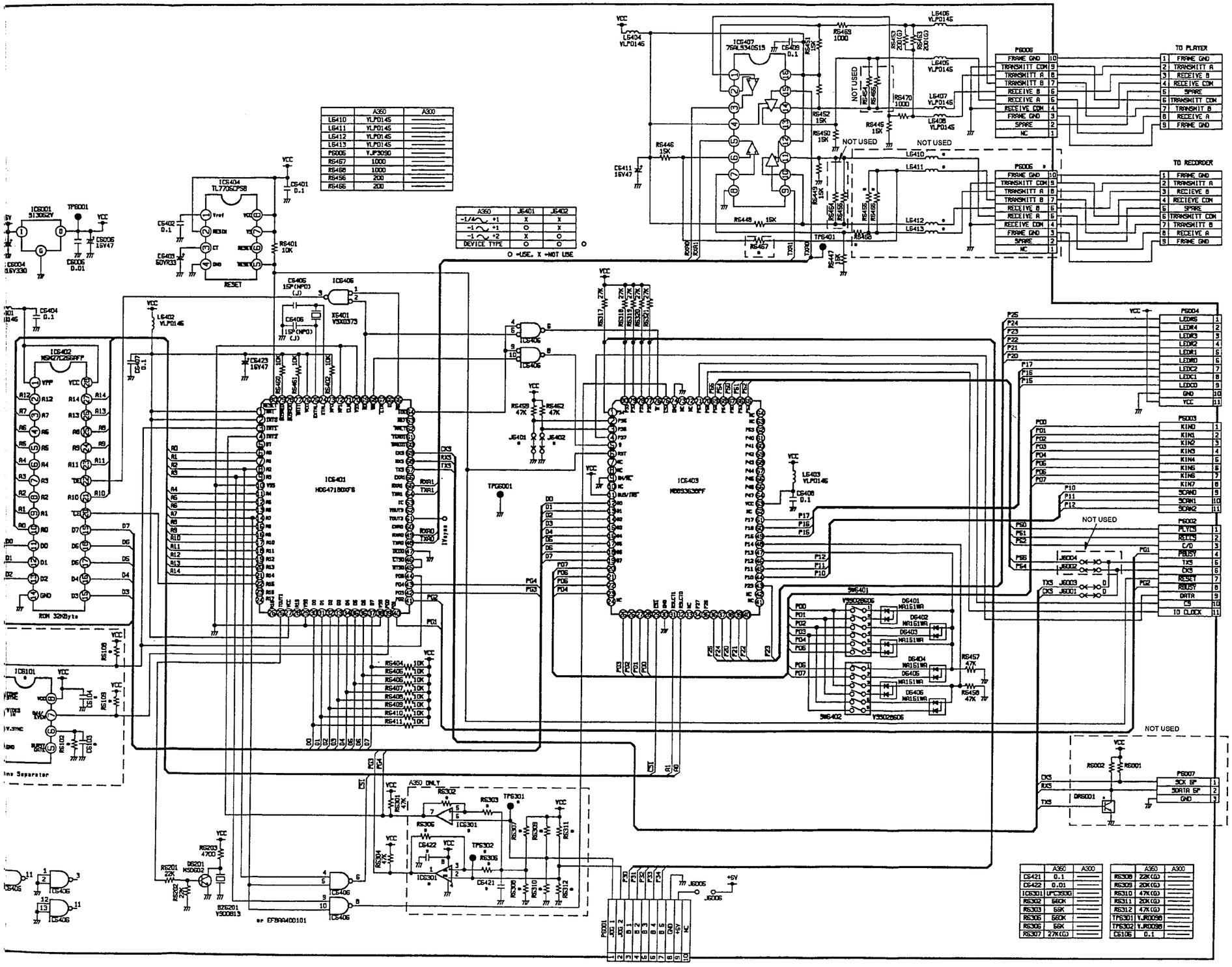


1 2 3 4 5 6 7 8 9 10 11 12 13
A B C D E F G H I
JK6001 YJ53381
DC6V
GND
C6002 100P
L6001 VLP0125
L6002 VLP0125
C6001 0.01
L6003 VLP0125
L6004 VLP0125
SW6001 YSS0154
C6008
NOT USED
D6001 11ES04
6V
IC6001 S13062Y
TP6001
VCC
C6003 0.01
C6004 16V330
C6005 0.01
C6006 16V47
IC6404 TL7706CPSB
Vref
RESIN
CT
GND
RESET
C6401 0.1
C6402 0.1
C6403 50VR33
R6401 10K
C6405 15P(NPO) (J)
C6406 15P(NPO) (J)
IC6406
X6401 YSX0373
L6401 VLP0145
C6404 0.1
L6402 VLP0145
IC6402 MSM27C256AFP
ROM 32KByte
C6407 0.1
C6423 16V47
R6460 10K
R6461 10K
R6402 10K
IC6401 HD647180XF6
IC6403 MB653635PF
J6008
J6007
A350 ONLY
P6101
GND
REFERENCE
NC
JK6101
R6104
L6102
R6106
D6101
C6106
C6105
R6101
C6102
C6101
R6103
R6105
R6107
TP6101
IC6101
COMP SYNC
VIDEO IN
V.SYNC
GND
ODD/EVEN
BURST GATE
Sync Separator
R6108
R6109
C6104
R6102
C6103
R6404 10K
R6405 10K
R6406 10K
R6407 10K
R6408 10K
R6409 10K
R6410 10K
R6411 10K
TPG6001
R6459 47K
R6462 47K
J6401
J6402
L6403 VLP0145
C6408 0.1
R6317 27K
R6318 27K
R6319 27K
R6320 27K
R6321 27K
L6404 VLP0145
IC6407 75ALS34051S
C6409 0.1
R6451 15K
R6469 1000
R6453 200(G)
R6463 200(G)
L6406 VLP0145
L6405 VLP0145
L6407 VLP0145
L6408 VLP0145
R6454
R6465
R6470 1000
R6452 15K
R6445 15K
R6450 15K
R6446 15K
C6411 16V47
R6449 15K
R6464
R6455
R6456
R6466
L6410
L6411
L6412
L6413
R6448 15K
R6467
TP6401
R6468
R6447 15K
RXD0
RXD1
TXD1
TXD0
SW6401 YSS028606
SW6402 YSS028606
D6401 MA151WA
D6402 MA151WA
D6403 MA151WA
D6404 MA151WA
D6405 MA151WA
D6406 MA151WA
R6457 47K
R6458 47K
CS1
A1
A0
R6201 22K
R6202 22K
D6201 MSD602
R6203 4700
BZ6201 YS00813
or EFBAA400101
R6301 47K
R6302
R6303
TP6301
IC6301
R6305
R6304 47K
C6422
TP6302
R6306
C6421
R6307
R6308
R6309
R6310
R6311
R6312
J6005
J6006
+6V
P6001
JOG 1
JOG 2
B 1
B 2
B 3
B 4
B 5
GND
+6V
NC
IC6405 MC74HC32AF
IC6406 MC74HC00AF
C6410 0.1
C6420 0.1

	A350	A300
L6410	YLP0145	———
L6411	YLP0145	———
L6412	YLP0145	———
L6413	YLP0145	———
P6005	YJP3090	———
R6467	1000	———
R6468	1000	———
R6456	200	———
R6466	200	———

A350	J6401	J6402
-1/4 ~ +1	X	X
-1 ~ +1	O	X
-1 ~ +2	X	O
DEVICE TYPE	O	O

O =USE, X =NOT USE



	A350	A300
L6410	VLP0145	
L6411	VLP0145	
L6412	VLP0145	
L6413	VLP0145	
PS005	VJP3090	
RS457	1000	
RS458	1000	
RS456	200	
RS455	200	

A350	J6401	J6402
-1/4 ~ +1	X	X
-1 ~ +1	O	X
-1 ~ +2	X	O
DEVICE TYPE	O	O

O =USE, X =NOT USE

	A350	A300
CS101	470(B)	
CS102	0.1	
CS103	0.1(Y)	
CS104	0.01	
CS105	16V10(M)	
CS106	0.1	
IC5101	LA1881M	
L6102	100U	
PS101	VJP1230T	
QS101	RSD602	
RS101	680	
RS102	680K	
RS103	75	
RS104	0	
RS105	27K	
RS106	47K	
RS107	100Ω	
RS108		47K
RS109		47K

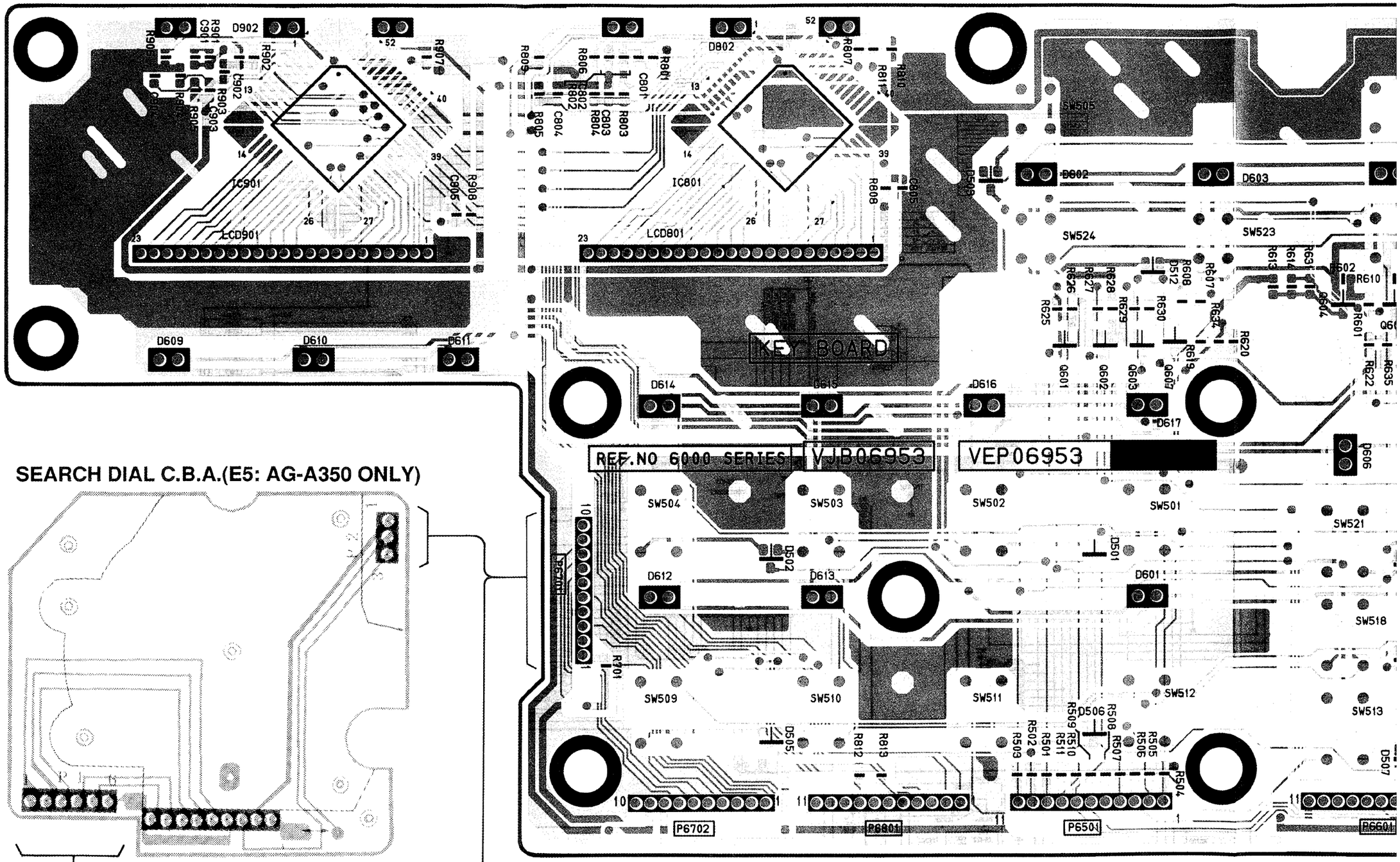
	A350	A300
CS421	0.1	
CS422	0.01	
IC5301	UPC3500	
RS302	560K	
RS303	68K	
RS305	560K	
RS306	68K	
RS307	27K(Ω)	

	A350	A300
RS308	22K(Ω)	
RS309	20K(Ω)	
RS310	47K(Ω)	
RS311	20K(Ω)	
RS312	47K(Ω)	
TP5301	VJR0096	
TP5302	VJR0096	
CS105	0.1	

*=REFER TO THE COMPARISON CHART

KEYBOARD C.B.A. (E3: AG-A350) AND SEARCH DIAL C.B.A.(E5: AG-A350 ONLY)

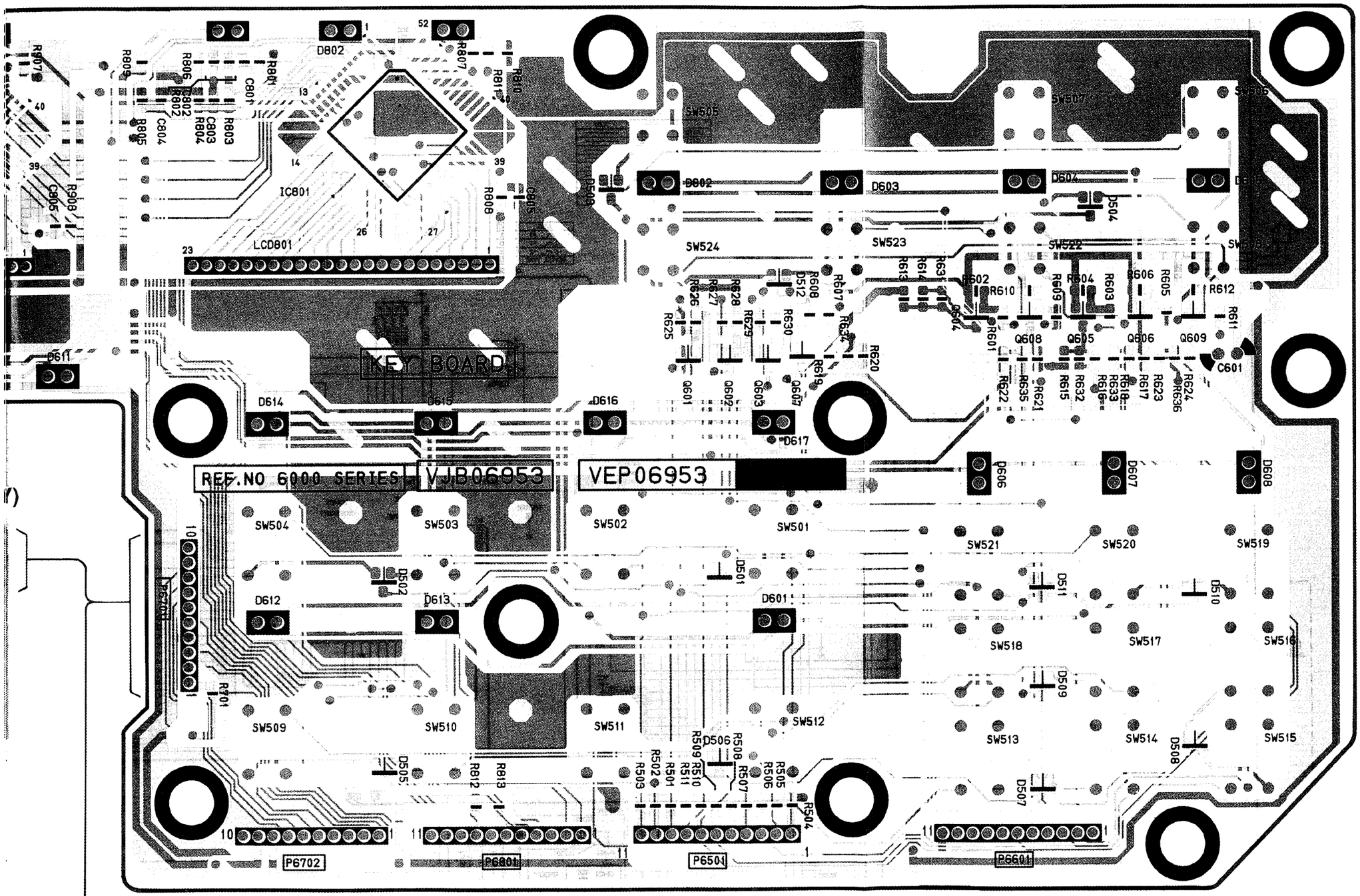
KEYBOARD C.B.A. (E3: AG-A350)



SEARCH DIAL C.B.A.(E5: AG-A350 ONLY)

C
B
A
1
2
3
4
5

H DIAL C.B.A.(E5: AG-A350 ONLY)



KEYBOARD C.B.A. (AG-A350)	
Transistor	
Q6601	B-4
Q6602	B-4
Q6604	C-5
Q6605	C-6
Q6606	C-6
Q6607	B-5
Q6608	C-5
Q6609	C-6
Integrated Circuit	
IC6801	C-3
IC6901	C-1
Connector	
P6501	A-4
P6601	A-5
P6701	B-3
P6702	A-3
P6801	A-4

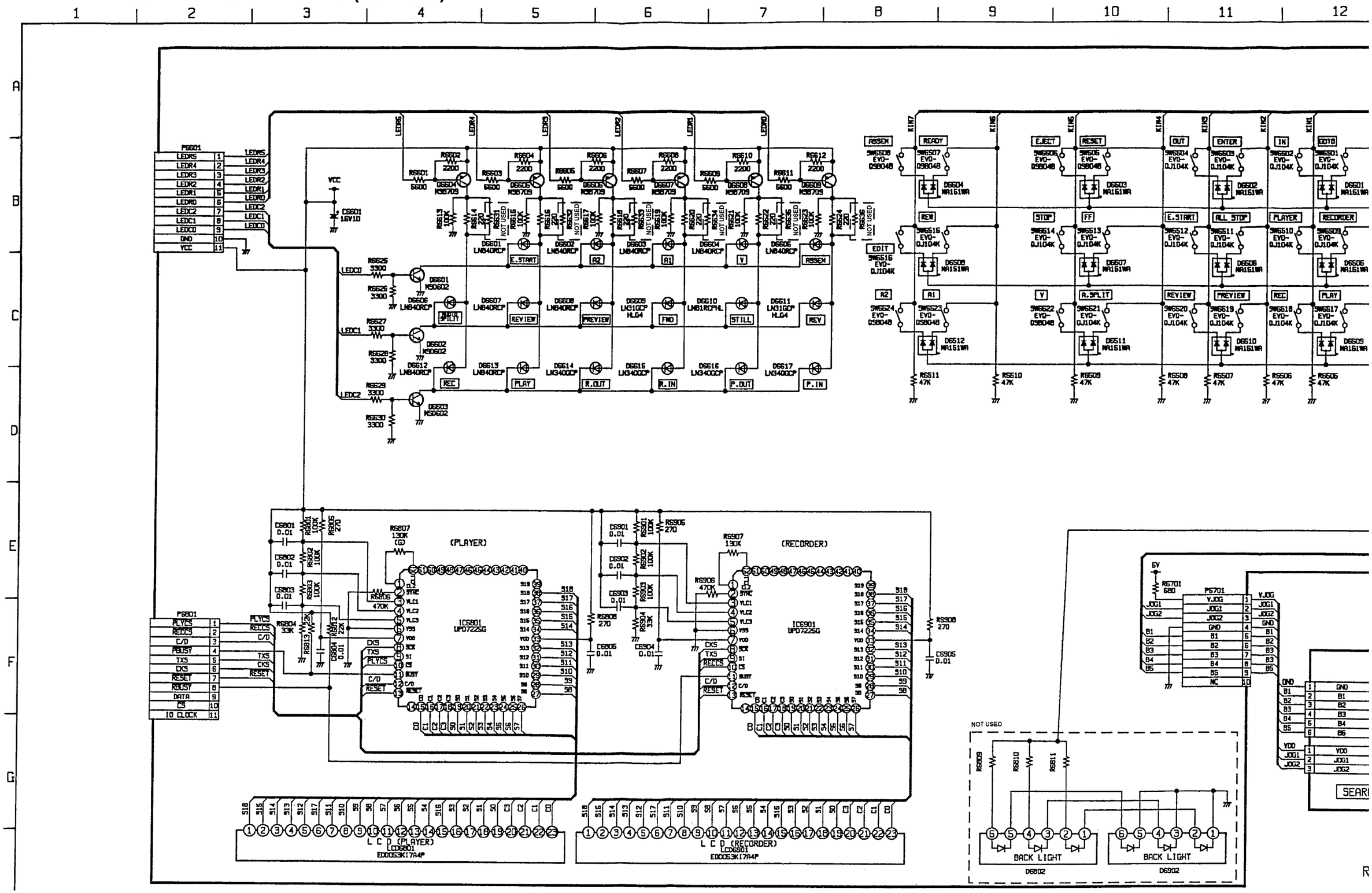
ADDRESS INFORMATION

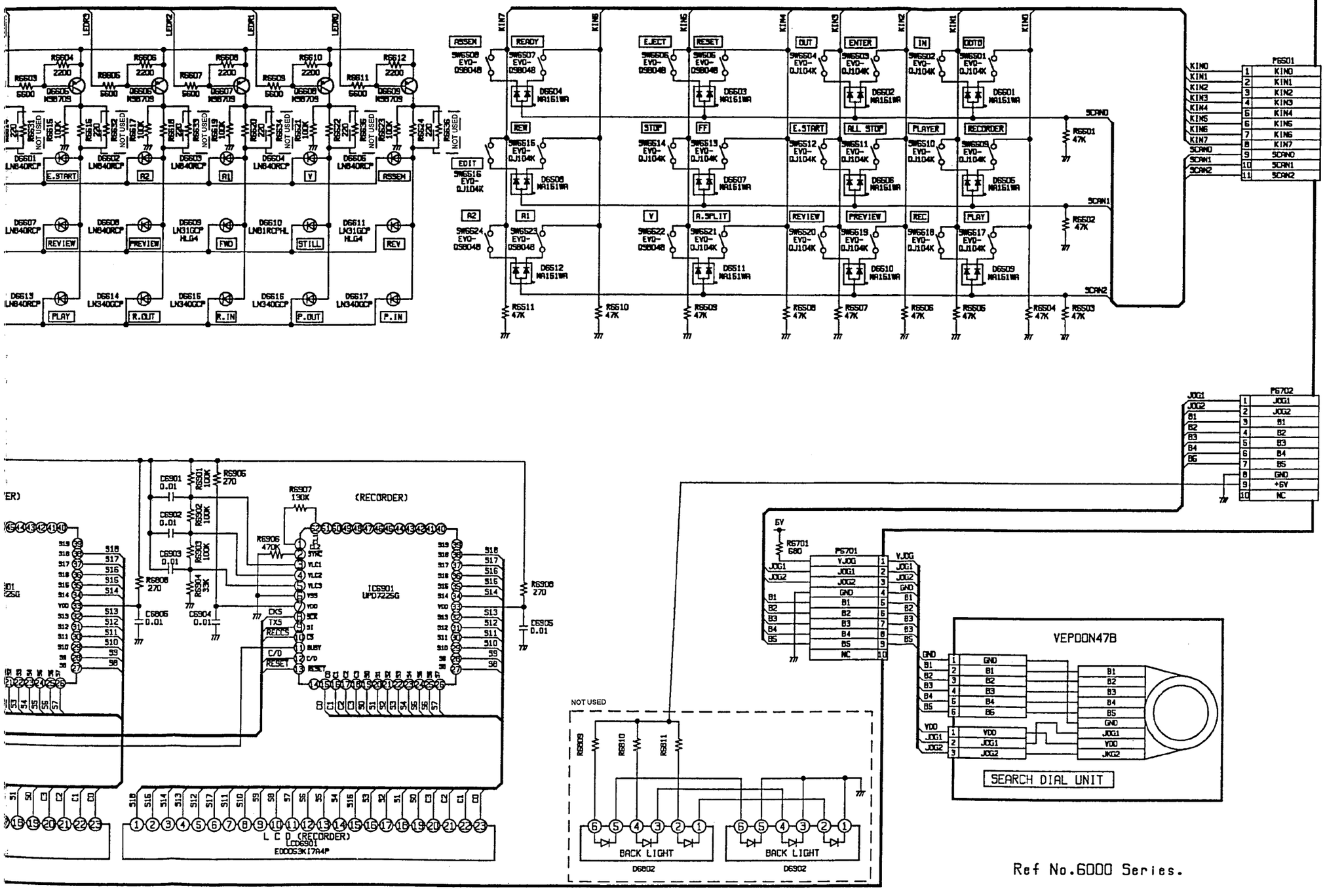
SEARCH DIAL C.B.A. (AG-A350 ONLY)	
Connector	
P1	A-1
P2	B-2

ADDRESS INFORMATION

2 3 4 5 6

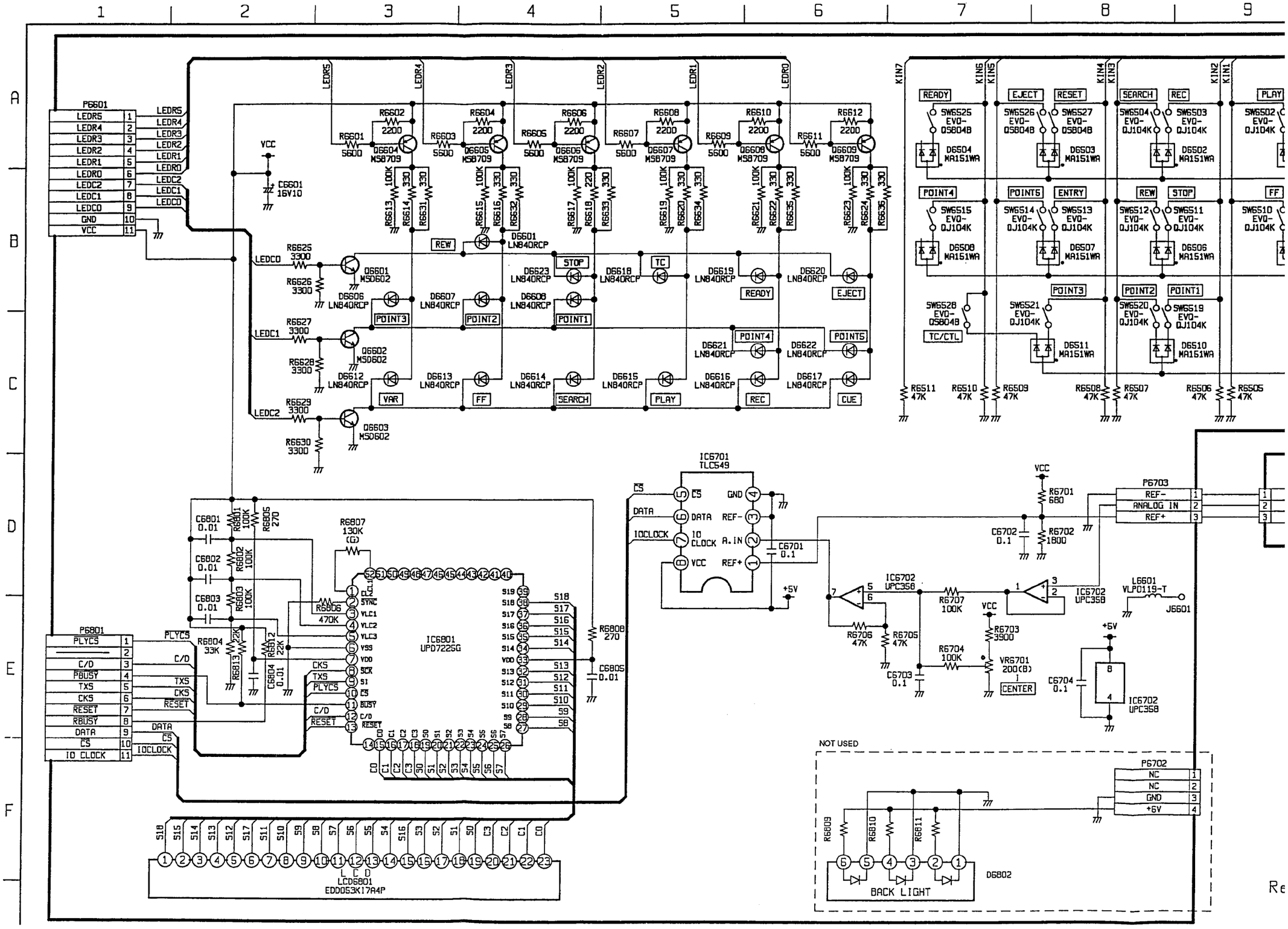
KEYBOARD SCHEMATIC DIAGRAMS (AG-A350)





Ref No.6000 Series.

KEYBOARD SCHEMATIC DIAGRAMS (AG-A300)



3 4 5 6 7 8 9 10 11

LEDR4 LEDR3 LEDR2 LEDR1 LEDR0

R6602 2200 R6604 2200 R6606 2200 R6608 2200 R6610 2200 R6612 2200

R6603 5600 R6605 5600 R6607 5600 R6609 5600 R6611 5600

D6604 MS8709 D6605 MS8709 D6606 MS8709 D6607 MS8709 D6608 MS8709 D6609 MS8709

R6613 100K R6614 330 R6631 330 R6615 100K R6616 330 R6632 330 R6617 100K R6618 220 R6633 330 R6619 100K R6620 330 R6634 330 R6621 100K R6622 330 R6635 330 R6623 100K R6624 330 R6636 330

REW D6601 LN840RCP

D6601 MSD602 D6623 LN840RCP STOP D6618 LN840RCP TC D6619 LN840RCP READY D6620 LN840RCP EJECT

D6606 LN840RCP POINT3 D6607 LN840RCP POINT2 D6608 LN840RCP POINT1

D6602 MSD602 D6621 LN840RCP POINT4 D6622 LN840RCP POINT5

D6612 LN840RCP VAR D6613 LN840RCP FF D6614 LN840RCP SEARCH D6615 LN840RCP PLAY D6616 LN840RCP REC D6617 LN840RCP CUE

D6603 MSD602

KIN7 KIN6 KIN5 KIN4 KIN3 KIN2 KIN1 KIN0

READY SW6525 EVQ-QS804B D6504 MA151WA

EJECT SW6526 EVQ-QS804B RESET SW6527 EVQ-QS804B D6503 MA151WA

SEARCH SW6504 EVQ-QJ104K REC SW6503 EVQ-QJ104K D6502 MA151WA

PLAY SW6502 EVQ-QJ104K CUE SW6501 EVQ-QJ104K D6501 MA151WA

SCAN0 R6501 47K

POINT4 SW6515 EVQ-QJ104K D6508 MA151WA

POINT5 SW6514 EVQ-QJ104K ENTRY SW6513 EVQ-QJ104K D6507 MA151WA

REW SW6512 EVQ-QJ104K STOP SW6511 EVQ-QJ104K D6506 MA151WA

FF SW6510 EVQ-QJ104K VAR SW6509 EVQ-QJ104K D6505 MA151WA

SCAN1 R6502 47K

SW6528 EVQ-QS804B TC/CTL

POINT3 SW6521 EVQ-QJ104K D6511 MA151WA

POINT2 SW6520 EVQ-QJ104K POINT1 SW6519 EVQ-QJ104K D6510 MA151WA

SCAN2

R6511 47K R6510 47K R6509 47K R6508 47K R6507 47K R6506 47K R6505 47K R6504 47K R6503 47K

P6501

KIN0	1	KIN0
KIN1	2	KIN1
KIN2	3	KIN2
KIN3	4	KIN3
KIN4	5	KIN4
KIN5	6	KIN5
KIN6	7	KIN6
KIN7	8	KIN7
SCAN0	9	SCAN0
SCAN1	10	SCAN1
SCAN2	11	SCAN2

IC6701 TLC549

CS DATA IOCLOCK

CS GND DATA REF- IO CLOCK A.IN VCC REF+

C6701 0.1 +5V

VCC R6701 680 C6702 0.1 R6702 1800

P6703

REF-	1	1 REF-
ANALOG IN	2	2 ANALOG IN
REF+	3	3 REF+

LEVER VR PCB.

IC6702 UPC358 R6707 100K IC6702 UPC358 L6601 VLP0119-T J6601

R6706 47K R6705 47K C6703 0.1 R6704 100K VCC R6703 3900 VR6701 200(B) CENTER

+5V C6704 0.1 IC6702 UPC358

R6805 0.01 R6808 270

IC6801 UPD7225G

S18 S17 S16 S15 S14 S13 S12 S11 S10 S9 S8

CL2 SYNC VLC1 VLC2 VLC3 VSS VDD SCK SI CS BUSY C/D RESET

C0 C1 C2 C3 S0 S1 S2 S3 S4 S5 S6 S7

D6801 3K17A4P

NOT USED

P6702

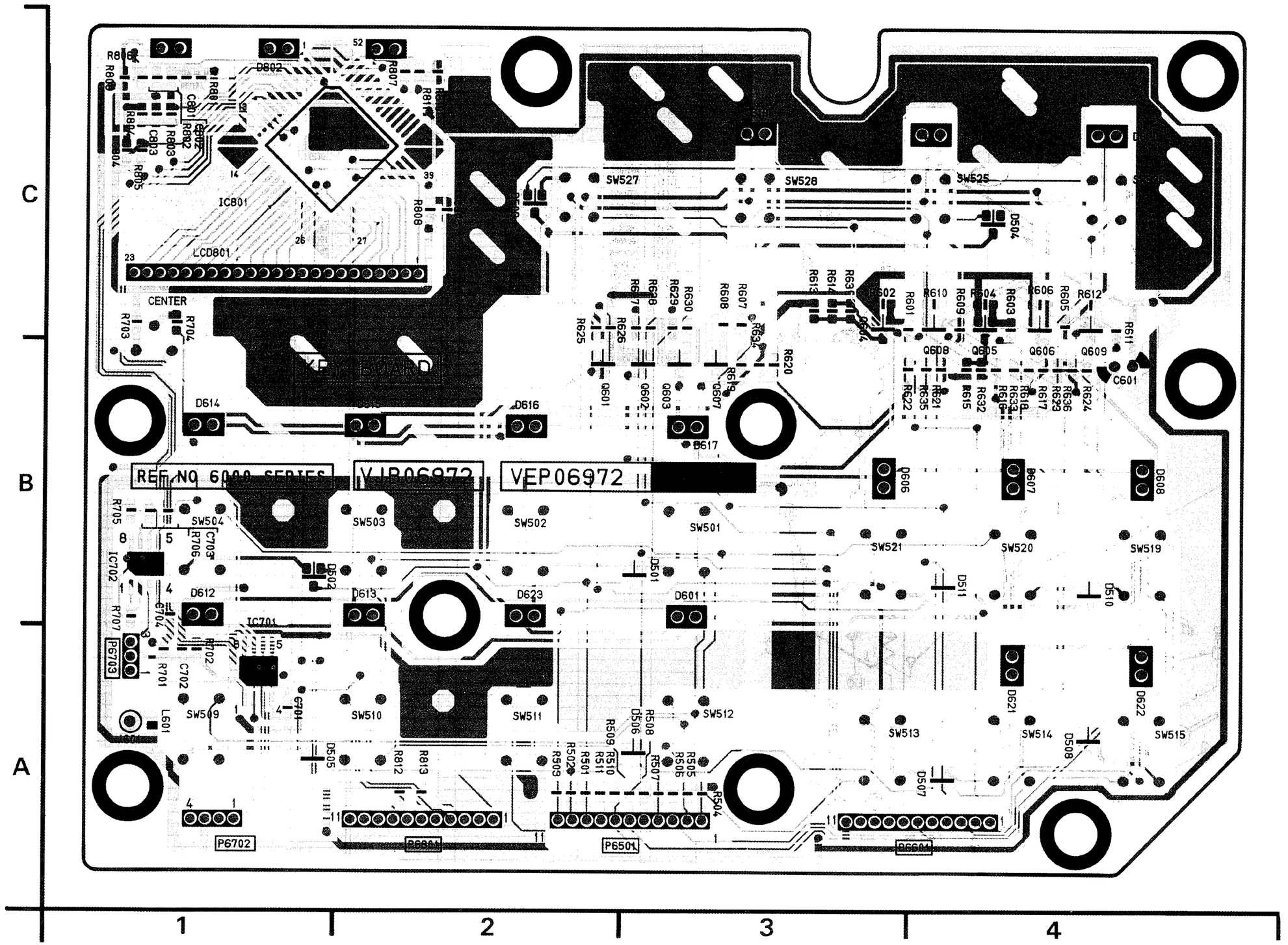
NC	1	
NC	2	
GND	3	
+6V	4	

R6809 R6810 R6811

D6802 BACK LIGHT

Ref No.6000 Series.

KEYBOARD C.B.A. (E4: AG-A300)

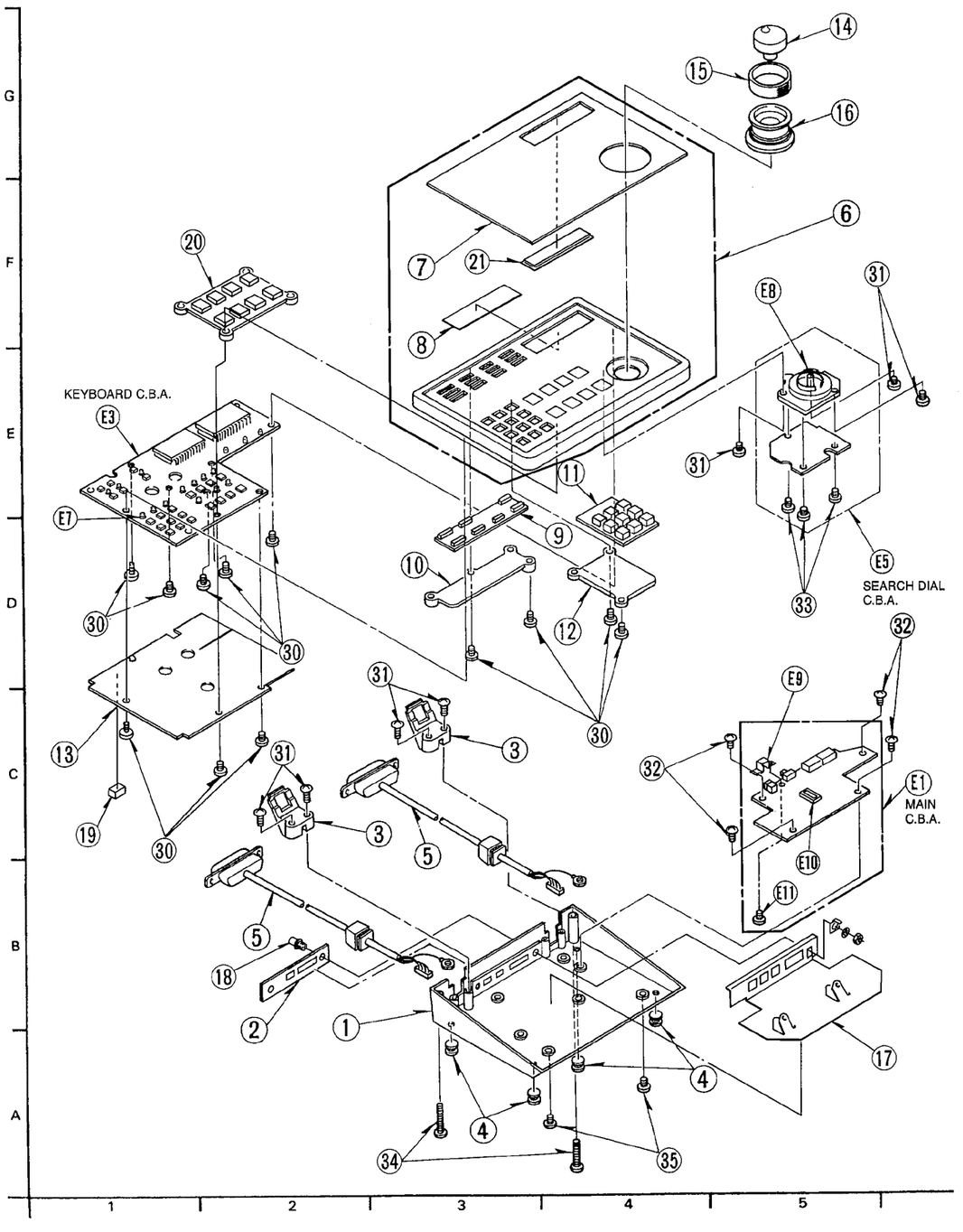


KEYBOARD C.B.A. (AG-A300)	
Transistor	
Q6601	B-2
Q6602	B-3
Q6603	B-3
Q6604	C-3
Q6605	B-4
Q6606	B-4
Q6607	B-3
Q6608	B-4
Q6609	B-4
Integrated Circuit	
IC6701	A-1
IC6702	B-1
IC6801	C-1
Connector	
P6501	A-3
P6601	A-4
P6702	A-1
P6703	A-1
P6801	A-2

ADDRESS INFORMATION

SECTION 3. EXPLODED VIEWS & REPLACEMENT PARTS LIST

❶ *Casing Parts Section (AG-A350)*



PRT−1

1. Casing Parts Section (AG-A350)

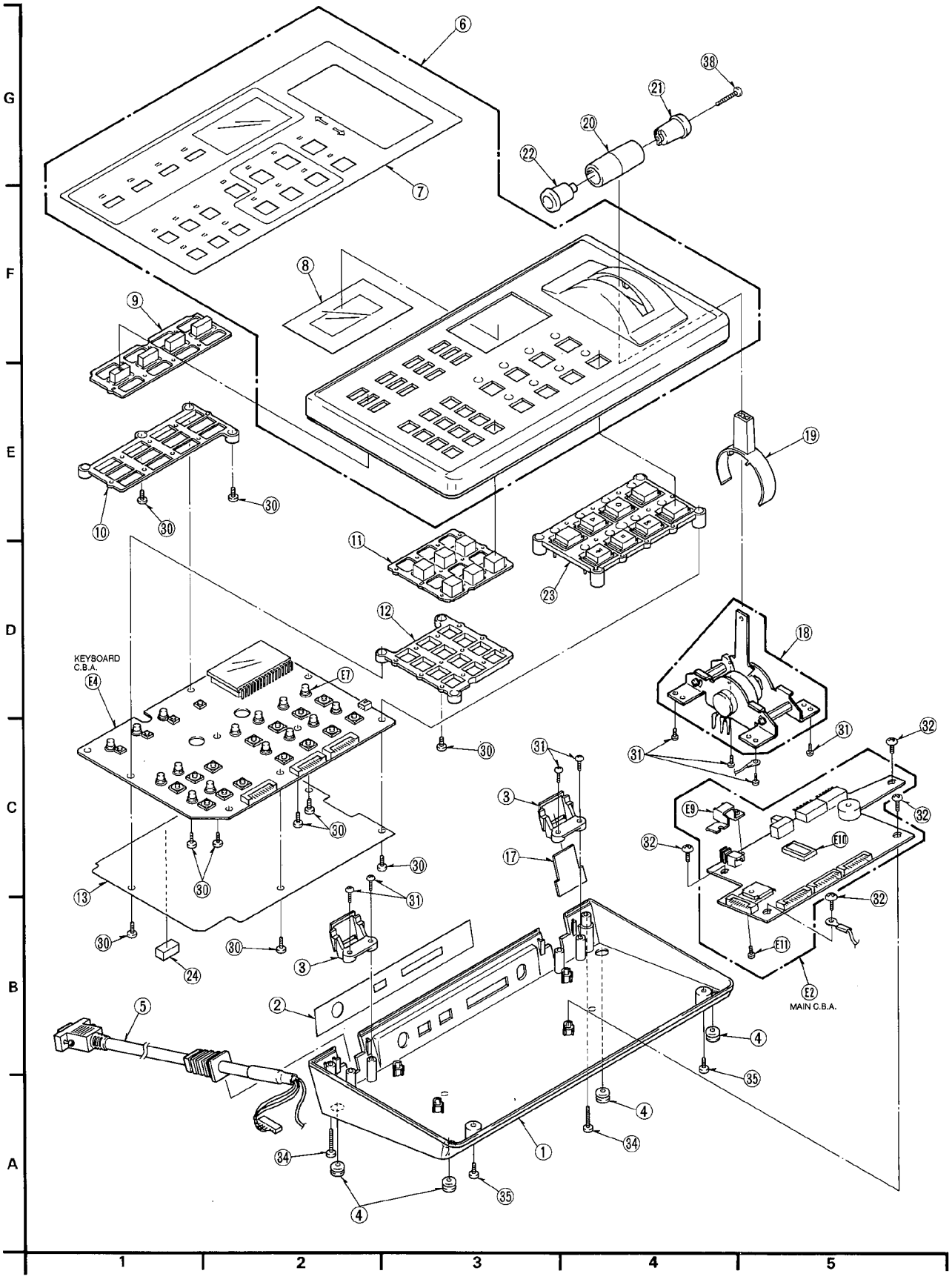
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1(1)	VKM3192	BOTTOM CASE	1	<R>
2(1)	VGH3413	SWITCH PLATE	1	
3(1)	VGQ1852	CORD FIXTURE	2	
4(1)	VKA0038	RUBBER FOOT	4	
5(1)	VJA0797	25P CORD	2	<R>
6(1)	VYP5523	TOP CASE UNIT	1	<R>
7(1)	VGH3412	TOP PLATE	1	<R>
8(1)	VKW1186	DISPLAY WINDOW	1	<R>
9(1)	VGU6557	FUNCTION KEY	1	<R>
10(1)	VGQ1851	KEY FIXTURE (A)	1	
11(1)	VGU6558	TEN KEY	1	<R>
12(1)	VGQ1850	KEY FIXTURE (B)	1	
13(1)	VSC4065	INSULATION PLATE	1	
14(1)	VXU0932	JOG DIAL KNOB	1	<R>
15(1)	VMG0476	RUBBER RING	1	<R>
16(1)	VGU4605	SHUTTLE DIAL KNOB	1	<R>
17(1)	VSC4066	SHIELD PLATE	1	
18(1)	VJJ0091	BNC JACK	1	
19(1)	VMX2334	CONDUCTOR SPACER	1	
20(1)	VXU1225	OPERATION BUTTON UNIT	1	
21(1)	VGH3447	DISPLAY PLATE	1	
30(1)	XTN4+10G	SCREW	12	
31(1)	XTV3+8G	SCREW	7	
32(1)	XTV4+8G	SCREW	4	
33(1)	XTV3+6F	SCREW	3	
34(1)	XSB3+16FZS	SCREW	2	
35(1)	XSB3+8FZ	SCREW	2	

2. Casing Parts Section (AG-A300)

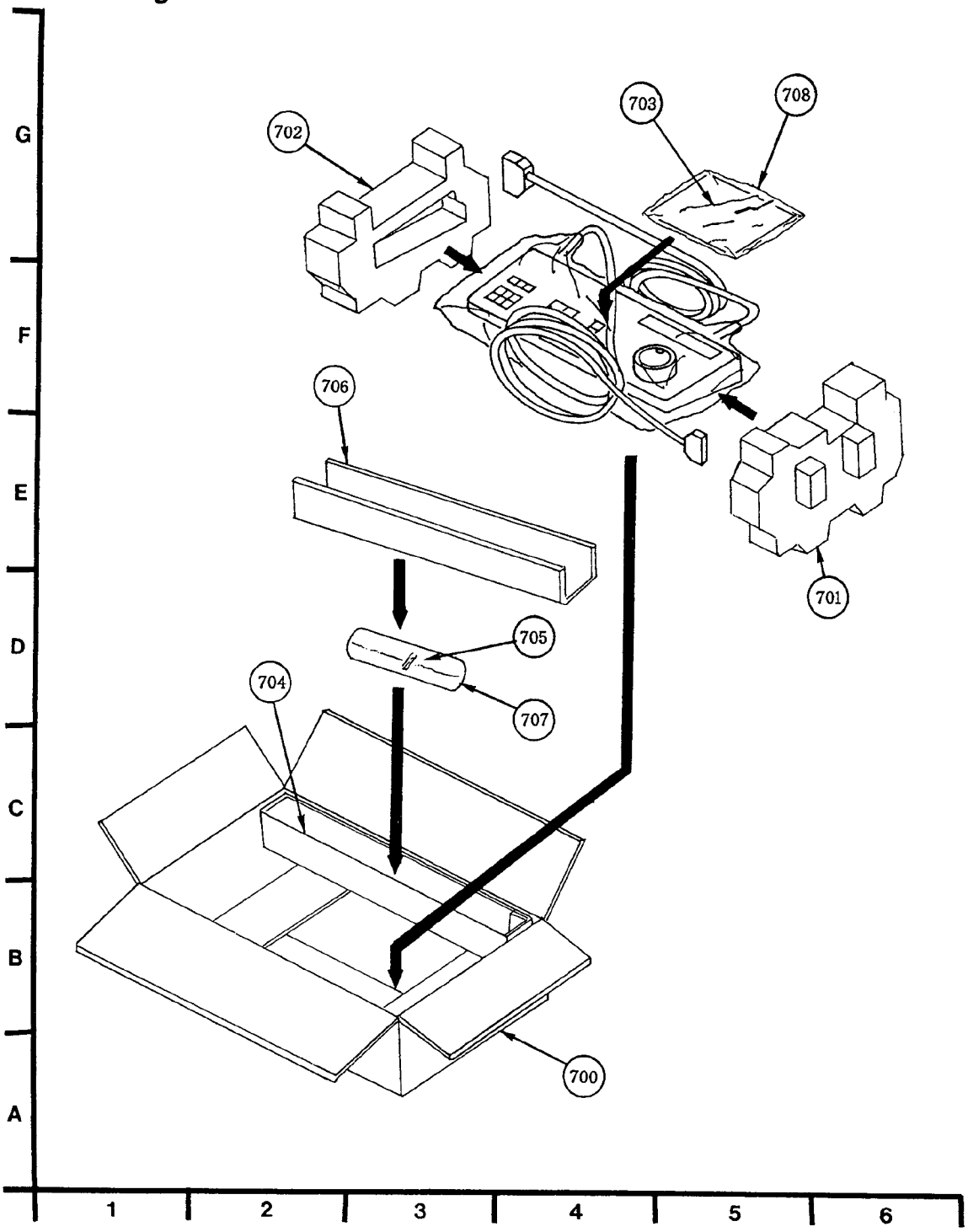
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1(2)	VKM3192	BOTTOM CASE	1	<R>
2(2)	VGH3446	SWITCH PLATE	1	
3(2)	VGQ1852	CORD FIXTURE	2	
4(2)	VKA0038	RUBBER FOOT	4	
5(2)	VJA0797	25P CORD	1	<R>
6(2)	VYP5526	TOP CASE UNIT	1	<R>
7(2)	VGH3414	TOP PLATE	1	<R>
8(2)	VGH3448	DISPLAY PLATE	1	<R>
9(2)	VGU6559	FUNCTION KEY	1	<R>
10(2)	VGQ1851	KEY FIXTURE (A)	1	
11(2)	VGU6560	TEN KEY	1	<R>
12(2)	VGQ1850	KEY FIXTURE (B)	1	
13(2)	VMZ4092	INSULATION PLATE	1	
17(2)	VGQ2995	CORD FIXTURE COVER	1	
18(2)	VXL2377	FADER LEVER UNIT	1	
19(2)	V5EA1151A3	FADER COVER	1	
20(2)	V5JA0089A3	FADER GRIP	1	
21(2)	V5GA0141A4	FADER CAP (A)	1	
22(2)	V5GA0142A4	FADER CAP (B)	1	
23(2)	VXU1226	OPERATION BUTTON UNIT	1	
24(2)	VMX2334	CONDUCTOR SPACER	1	
30(2)	XTN4+10G	SCREW	11	
31(2)	XTV3+8G	SCREW	8	
32(2)	XTV4+8G	SCREW	4	
34(2)	XSB3+16FZS	SCREW	2	
35(2)	XSB3+8FZ	SCREW	2	
36(2)	XTV3+12JFZ	SCREW	1	

PRT−2

❷ *Casing Parts Section (AG-A300)*



❸ Packing Parts Section



3. Packing Parts Section

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
700(3)		VPG6618	PACKING CASE	1	<R>
701(3)		VPN2475	CUSHION (RIGHT)	1	
702(3)		VPN2476	CUSHION (LEFT)	1	
703(3)		VQT5772	OPERATING INSTRUCTIONS	1	<R><I>
			(ENGLISH, FRENCH, JAPANESE)		AG-A350P
703(3)		VQT5772	OPERATING INSTRUCTIONS	1	<R><I>
			(ENGLISH, FRENCH, JAPANESE)		AG-A300P
704(3)		VPG6619	ACCESSORIES BOX	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
705(3)		VSK0250	AC ADAPTOR	1	<I>
706(3)		VPN3513	ACCESSORISE SPACER	1	
707(3)		VPF0527	AIR CAP BAG	1	
708(3)		VPF0210	POLYETHYLENE BAG	1	

ELECTRICAL REPLACEMENT PARTS SECTION

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
E1	VEP06952A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		MAIN		AG-A350P
E2	VEP06952B	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		MAIN		AG-A300P
E3	VEP06953A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		KEY BOARD		AG-A350P
E4	VEP06972A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		KEY BOARD		AG-A300P
E5	VEP00N47B	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		SEARCH DIAL		AG-A350P
	VEP06952A	P.C.BOARD W/COMPONENT		AG-A350
		MAIN		
BZ6201	VSQ0813	BUZZER	1	
		CAPACITORS		
C6001	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6002	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C6003	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6004	ECEA1CU331	E.CAPACITOR 16V 330U	1	
C6005	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6006	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C6101	ECQB1H471JZ	P.CAPACITOR 50V 470P	1	
C6102	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C6103	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C6104	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6105	ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C6106	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C6401,02	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C6403	ECEA1HKAR33	E.CAPACITOR 50V 0.33U	1	
C6404	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C6405,06	ECUM1H150JCN	C.CAPACITOR CH 50V 15P	2	
C6407-10	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C6411	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C6420,21	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C6422	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6423	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
D6001	11EQS04	DIODE	1	<R>
D6401-06	MA151WA	DIODE	6	<R>
IC6001	SI3052V	IC	1	<R>
IC6101	LM1881M	IC	1	<R>
IC6301	UPC393G2	IC	1	<R>
IC6401	HD641180XF6	IC	1	<R>
IC6402	VSI1474	IC	1	<R>
IC6403	MB89363BPF	IC	1	<R>
IC6404	TL7705CPSB	IC	1	<R>
IC6405	MC74HC32AF	IC	1	<R>
IC6406	MC74HC00AF	IC	1	<R>
IC6407	75ALS34051S	IC	1	<R>
IC6402S	VJS3427X028	IC SOCKET	1	
J6001	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
J6003	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
J6401,02	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
JK6001	VJS3381	CONNECTOR (FEMALE)	1	
L6001-04	VLP0125	COIL	4	
L6102	VLQEL05F101K	COIL	1	
L6401-08	VLP0145	COIL	8	
L6410-13	VLP0145	COIL	4	
P6001	VJP3090	CONNECTOR (MALE)	1	
P6002-04	VJP3091	CONNECTOR (MALE)	3	
P6005,06	VJP3090	CONNECTOR (MALE)	2	
P6101	VJP1230T	CONNECTOR (MALE)	1	
Q6101	MSD602-R	TRANSISTOR	1	<R>
Q6201	MSD602-R	TRANSISTOR	1	<R>
		RESISTORS		
R6101	ERJ6GEYJ681	M.RESISTOR CH1/16W 680	1	
R6102.	ERJ6GEYJ684	M.RESISTOR CH1/16W 680K	1	
R6103	ERJ6GEYJ750	M.RESISTOR CH1/16W 75	1	
R6104	ERJ6GEY0R00	M.RESISTOR CH1/16W 0.00	1	
R6105	ERJ6GEYJ273	M.RESISTOR CH1/16W 27K	1	
R6106	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1	
R6107	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R6201,02	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	2	
R6203	ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	1	
R6301	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1	
R6302	ERJ6GEYJ564	M.RESISTOR CH1/16W 560K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R6303	ERJ6GEYJ563	M.RESISTOR CH1/16W 56K	1	
R6304	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1	
R6305	ERJ6GEYJ564	M.RESISTOR CH1/16W 560K	1	
R6306	ERJ6GEYJ563	M.RESISTOR CH1/16W 56K	1	
R6307	ERJ6GEYG273	M.RESISTOR CH1/16W 27K	1	
R6308	ERJ6GEYG223	M.RESISTOR CH1/16W 22K	1	
R6309	ERJ6GEYG203	M.RESISTOR CH1/16W 20K	1	
R6310	ERJ6GEYG473	M.RESISTOR CH1/16W 47K	1	
R6311	ERJ6GEYG203	M.RESISTOR CH1/16W 20K	1	
R6312	ERJ6GEYG473	M.RESISTOR CH1/16W 47K	1	
R6317-21	ERJ6GEYJ273	M.RESISTOR CH1/16W 27K	5	
R6401,02	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2	
R6404-11	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	8	
R6445-52	ERJ6GEYJ153	M.RESISTOR CH1/16W 15K	8	
R6453	ERJ6GEYG201	M.RESISTOR CH1/16W 200	1	
R6456	ERJ6GEYG201	M.RESISTOR CH1/16W 200	1	
R6457-59	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	3	
R6460,61	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2	
R6462	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1	
R6463	ERJ6GEYG201	M.RESISTOR CH1/16W 200	1	
R6466	ERJ6GEYG201	M.RESISTOR CH1/16W 200	1	
R6467-70	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	4	
SW6001	VSS0154	SWITCH	1	<R>
SW6401,02	VSS028606	SWITCH	2	<R>
X6401	VSX0373	CRYSTAL OSCILLATOR	1	<R>
		MISCELLANEOUS		
E9	VMP3890	ANGLE	1	
E10	VJF1046	IC HOLDER	1	
E11	XTV3+6F	SCREW	1	
	VEP06952B	P.C.BOARD W/COMPONENT		AG-A300P
		MAIN		
BZ6201	VSQ0813	BUZZER	1	
		CAPACITORS		
C6001	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6002	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C6003	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6004	ECEA1CU331	E.CAPACITOR 16V 330U	1	
C6005	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6006	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C6401,02	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C6403	ECEA1HKAR33	E.CAPACITOR 50V 0.33U	1	
C6404	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C6405,06	ECUM1H150JCN	C.CAPACITOR CH 50V 15P	2	
C6407-10	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C6411	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C6420	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C6423	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
D6001	11EQS04	DIODE	1	<R>

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
D6401-06	MA151WA	DIODE	6	<R>
IC6001	SI3052V	IC	1	<R>
IC6401	HD641180XF6	IC	1	<R>
IC6402	VSI1475	IC	1	<R>
IC6403	MB89363BPF	IC	1	<R>
IC6404	TL7705CPSB	IC	1	<R>
IC6405	MC74HC32AF	IC	1	<R>
IC6406	MC74HC00AF	IC	1	<R>
IC6407	75ALS34051S	IC	1	<R>
J6001	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
J6003	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
JK6001	VJS3381	CONNECTOR (FEMALE)	1	
L6001-04	VLP0125	COIL	4	
L6401-08	VLP0145	COIL	8	
P6002-04	VJP3091	CONNECTOR (MALE)	3	
P6006	VJP3090	CONNECTOR (MALE)	1	
Q6201	MSD602-R	TRANSISTOR	1	<R>
		RESISTORS		
R6108,09	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	2	
R6201,02	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	2	
R6203	ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	1	
R6301	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1	
R6304	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1	
R6317-21	ERJ6GEYJ273	M.RESISTOR CH1/16W 27K	5	
R6401,02	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2	
R6404-11	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	8	
R6445-52	ERJ6GEYJ153	M.RESISTOR CH1/16W 15K	8	
R6453	ERJ6GEYG201	M.RESISTOR CH1/16W 200	1	
R6457-59	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	3	
R6460,61	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2	
R6462	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1	
R6463	ERJ6GEYG201	M.RESISTOR CH1/16W 200	1	
R6469,70	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2	
SW6001	VSS0154	SWITCH	1	<R>
SW6401,02	VSS028606	SWITCH	2	<R>
X6401	VSX0373	CRYSTAL OSCILLATOR	1	<R>
		MISCELLANEOUS		
E9	VMP3890	ANGLE	1	
E10	VJF1046	IC HOLDER	1	
E11	XTV3+6F	SCREW	13	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	VEP06953A	P.C.BOARD W/COMPONENT		AG-A350P
		KEY BOARD		
		CAPACITORS		
C6601	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C6801-05	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	5	
C6901-05	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	5	
D6501-12	MA151WA	DIODE	12	<R>
D6601-08	LN840RCP	DIODE	8	<R>
D6609	LN31GCPHL	DIODE	1	<R>
D6610	LN81RCPHL	DIODE	1	<R>
D6611	LN31GCPHL	DIODE	1	<R>
D6612,13	LN840RCP	DIODE	2	<R>
D6614-17	LN340GCPG	DIODE	4	<R>
IC6801	UPD7225G00	IC	1	<R>
IC6901	UPD7225G00	IC	1	<R>
LCD6801	EDD053KI7A4	LCD	1	
LCD6901	EDD053KI7A4	LCD	1	
P6501	VJP3091	CONNECTOR (MALE)	1	
P6601	VJP3091	CONNECTOR (MALE)	1	
P6701,02	VJP3090	CONNECTOR (MALE)	2	
P6801	VJP3091	CONNECTOR (MALE)	1	
Q6601-03	MSD602-R	TRANSISTOR	3	<R>
Q6604-09	MSB709-R	TRANSISTOR	6	<R>
		RESISTORS		
R6501-11	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	11	
R6601	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
R6602	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R6603	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
R6604	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R6605	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
R6606	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R6607	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
R6608	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R6609	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
R6610	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R6611	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
R6612	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R6613	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R6614	ERJ6GEYJ221	M.RESISTOR CH1/16W 220	1	
R6615	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R6616	ERJ6GEYJ221	M.RESISTOR CH1/16W 220	1	
R6617	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R6618	ERJ6GEYJ221	M.RESISTOR CH1/16W 220	1	
R6619	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R6620	ERJ6GEYJ221	M.RESISTOR CH1/16W 220	1	
R6621	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R6622	ERJ6GEYJ221	M.RESISTOR CH1/16W 220	1	
R6623	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R6624	ERJ6GEYJ221	M.RESISTOR CH1/16W 220	1	
R6625-30	ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	6	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R6701	ERJ6GEYJ681	M.RESISTOR CH1/16W 680	1	
R6801-03	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	3	
R6804	ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
R6805	ERJ6GEYJ271	M.RESISTOR CH1/16W 270	1	
R6806	ERJ6GEYJ474	M.RESISTOR CH1/16W 470K	1	
R6807	ERJ6GEYG134	M.RESISTOR CH1/16W 130K	1	
R6808	ERJ6GEYJ271	M.RESISTOR CH1/16W 270	1	
R6812,13	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	2	
R6901-03	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	3	
R6904	ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
R6905	ERJ6GEYJ271	M.RESISTOR CH1/16W 270	1	
R6906	ERJ6GEYJ474	M.RESISTOR CH1/16W 470K	1	
R6907	ERJ6GEYG134	M.RESISTOR CH1/16W 130K	1	
R6908	ERJ6GEYJ271	M.RESISTOR CH1/16W 270	1	
SW6501-04	EVQQJ104K	SWITCH	4	<R>
SW6505-08	EVQQSB04B	SWITCH	4	<R>
SW6509-21	EVQQJ104K	SWITCH	13	<R>
SW6522-24	EVQQSB04B	SWITCH	3	<R>
		MISCELLANEOUS		
E7	XWGV4F7Y	LED SPACER	14	
	VEP06972A	P.C.BOARD W/COMPONENT		AG-A300P
		KEY BOARD		
		CAPACITORS		
C6601	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C6701-04	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C6801-05	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	5	
D6501-08	MA151WA	DIODE	8	<R>
D6510,11	MA151WA	DIODE	2	<R>
D6601	LN840RCP	DIODE	1	<R>
D6606-08	LN840RCP	DIODE	3	<R>
D6612-23	LN840RCP	DIODE	12	<R>
IC6701	TLC549IPS	IC	1	<R>
IC6702	UPC358G2	IC	1	<R>
IC6801	UPD7225G00	IC	1	<R>
L6601	VLP0119	COIL	1	
LCD6801	EDD053KI7A4	LCD	1	
P6501	VJP3091	CONNECTOR (MALE)	1	
P6601	VJP3091	CONNECTOR (MALE)	1	
P6703	VJP1243T	CONNECTOR (MALE)	1	
P6801	VJP3091	CONNECTOR (MALE)	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Q6601-03	MSD602-R	TRANSISTOR	3	<R>
Q6604-09	MSB709-R	TRANSISTOR	6	<R>
		RESISTORS		
R6501-11	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	11	
R6601	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
R6602	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R6603	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
R6604	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R6605	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
R6606	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R6607	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
R6608	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R6609	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
R6610	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R6611	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
R6612	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R6613	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R6614	ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1	
R6615	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R6616	ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1	
R6617	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R6618	ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1	
R6619	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R6620	ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1	
R6621	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R6622	ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1	
R6623	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R6624	ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1	
R6625-30	ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	6	
R6631-36	ERJ6GEYJ331	M.RESISTOR CH1/16W 330	6	
R6701	ERJ6GEYJ681	M.RESISTOR CH1/16W 680	1	
R6702	ERJ6GEYJ182	M.RESISTOR CH1/16W 1.8K	1	
R6703	ERJ6GEYJ392	M.RESISTOR CH1/16W 3.9K	1	
R6704	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R6705,06	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	2	
R6707	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R6801-03	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	3	
R6804	ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
R6805	ERJ6GEYJ271	M.RESISTOR CH1/16W 270	1	
R6806	ERJ6GEYJ474	M.RESISTOR CH1/16W 470K	1	
R6807	ERJ6GEYG134	M.RESISTOR CH1/16W 130K	1	
R6808	ERJ6GEYJ271	M.RESISTOR CH1/16W 270	1	
R6812,13	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	2	
SW6501-04	EVQQJ104K	SWITCH	4	<R>
SW6509-15	EVQQJ104K	SWITCH	7	<R>
SW6519-21	EVQQJ104K	SWITCH	3	<R>
SW6525-28	EVQQSB04B	SWITCH	4	<R>
VR6701	EVM38GA00B22	V.RESISTOR	1	
		MISCELLANEOUS		
E7	XWGV4F7Y	LED SPACER	16	
	VEPOON47B	P.C.BOARD W/COMPONENT		AG-A350P
		SEARCH DIAL		

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
P401	VJP1243T	CONNECTOR (MALE)	1	
P402	VJP1246T	CONNECTOR (MALE)	1	
		MISCELLANEPUS		
E8	VSQ0651	JOG/SHUTLE DIAL	1	

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